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# Oral Disease in Vulnerable Children and the Dentist's Role in Child Protection

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Submitted in fulfilment of the requirements for the  
Degree of Master of Science (by Research)

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# Abstract

## Introduction

In 2005 Cairns et al examined the role of Scottish general dental practitioners (GDPs) in child protection (Cairns et al., 2005a). In 2006 all UK dental practices were sent “Child Protection and the Dental Team” (Harris et al., 2006). There has been no published research since 2006 investigating whether the proportions of GDPs who suspect child abuse/ neglect and those who refer cases has changed. Additionally there is no published work in the UK on the oral health of children with welfare concerns.

## Aims

To determine the proportion of Scottish GDPs who suspected child abuse/ neglect and the proportion that referred suspected cases, what factors influenced referral and the willingness of Scottish GDPs to be involved in detecting neglect.

To establish dental input in comprehensive medical assessments (CMAs) and quantify the oral health of children “with a welfare concern”.

## Materials and methods

A postal questionnaire was sent to 50% (n=1215) of Scottish GDPs.

Children with welfare concerns in NHS Greater Glasgow and Clyde received a comprehensive oral health assessment (COA) as part of a CMA. The child’s age, dmft/dmfs scores, postcode, details of registration with dental services and soft tissue abnormalities were recorded.

## Results

The questionnaire response rate was 52% (53% male). 30% and 55% of respondents had received undergraduate or postgraduate training in child protection respectively. 37% had suspected child abuse/neglect but only 11% had referred a case. The most common factor that affected referral was “lack of certainty of the diagnosis” (74%). 73% of dentists were willing to get involved in detecting neglect.

The age range for children who had a COA was 4 months to 16 years (mean 6 years). All resided in areas with SIMD quintiles  $\leq 3$ . 32% of children  $\leq 9$  years and 17% of children  $\geq 10$  years were caries free. The mean number of decayed, missing and filled teeth (dmft) for children  $\leq 9$  years was 2.52 and 5.0 for those  $\geq 10$  years. For those  $\leq 9$  years with evidence of caries experience dmft was 3.7 and for those  $\geq 10$  years the DMFT was 6. 7.4% had evidence of trauma and 5.4% had enamel defects.

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## Preface

I first became interested in Child Protection when I worked as a volunteer telephone counsellor at ChildLine while I was in the early years of my undergraduate dental degree. In addition, as an undergraduate, and as a dental foundation trainee, I was fortunate enough to be taught by both Professor R. R. Welbury and Dr Alison M Cairns. Their research interest was child protection and the role of the dental practitioner. As soon as I started my specialty training in 2009 I knew that this was also an area I wanted to explore, with specific emphasis on neglect. I have learned that in this world, and especially in the current difficult financial climate, those who have no voice are easily overlooked. It is important to be a voice for those children who are otherwise unheard. Their need is arguably greater than the rest of society, but they never make the headlines unless there is a criminal investigation against their carers or others who have failed them. I am honoured to bring their case to the readers of this research, and I hope I can improve their lot in life in some small way.

I hope you learn something from my work, I certainly did.

One hundred years from now  
 It won't matter  
 What kind of car I drove  
 What kind of house I lived in  
 How much money I had in the bank  
 Nor what my clothes looked like  
 But the world may be a little better  
 Because, I was important in the life of a child.

(Excerpt from "Within My Power" by Forest Witcraft)

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## **Author's Declaration**

This thesis represents the original work of the author, unless otherwise stated in the text.

Christine Marion Harris

## Definitions/Abbreviations

<b>AAPD</b>	American Academy of Pediatric Dentistry
<b>ACPC</b>	Area child protection committees
<b>BPE</b>	Basic periodontal examination
<b>BSPD</b>	British Society of Paediatric Dentistry
<b>CDS</b>	Community dental service. Also known as salaried dental service
<b>CHI</b>	Community Health Index
<b>CLEFTSiS</b>	A managed clinical network for Cleft Services in Scotland
<b>CLEO</b>	Collaborative learning environment online
<b>CMA</b>	Comprehensive medical assessment
<b>COA</b>	Comprehensive oral assessment. Forms an integral part of the comprehensive medical assessment.
<b>CPD</b>	Continued professional development
<b>CPDT</b>	Child protection and the dental team
<b>CPU</b>	Child protection unit. For NHS Greater Glasgow & Clyde this is based at the Royal Hospital for Sick Children, Yorkhill

<b>DMFS/ dmfs</b>	Decayed , missing and filled surfaces in permanent dentition/ primary dentition
<b>DMFT/ dmft</b>	Decayed , missing and filled teeth in permanent dentition/ primary dentition
<b>GDP</b>	General dental practitioner. Often also known as a “high-street dentist”
<b>GDS</b>	General dental services. Also commonly known as high street dentists
<b>GIRFEC</b>	Getting it right for every child
<b>HDS</b>	Hospital dental service
<b>HMle</b>	Her Majesty’s Inspectors of education
<b>ISD</b>	Information Services Division
<b>KSF</b>	Knowledge Skills Framework
<b>NDIP</b>	National Dental Inspection Programme
<b>NES</b>	NHS Education for Scotland
<b>NHS</b>	National Health Service
<b>NHSGGC</b>	NHS Greater Glasgow & Clyde
<b>RHSC</b>	Royal Hospital for Sick Children

<b>SIMD</b>	Scottish Index of Multiple Deprivation
<b>VT</b>	Vocational Trainee

# Chapter 1 Introduction

## **Oral disease in vulnerable children and the dentist's role in child protection.**

In 2005 Cairns et al published a paper examining the role of the general dental practitioner in child protection in Scotland (Cairns et al., 2005a). This paper highlighted a gap between the numbers of dentists who suspect the need for child protection in their patients and those who actually refer them on. It also examined the reasons that influenced the Scottish dentists' decision to refer or ignore suspicious cases.

Subsequent to this in 2006 all dental practices in Scotland and the rest of the UK were sent a document entitled "Child Protection and the Dental Team" which was commissioned by the Chief Dental Officer for England (Harris et al., 2006). This is a training manual for the dental team aiming to improve knowledge on the signs and symptoms of child abuse and neglect along with information regarding appropriate generic referral protocols. In addition, NHS Education for Scotland has funded Scotland wide postgraduate training courses on the subject of child abuse and neglect. Training in Child Protection is also a topic in vocational training/dental foundation programs and forms part of the undergraduate dental curriculum in UK dental schools (Committee of Postgraduate Dental Deans and Directors, 2006; General Dental Council, 2008a). The public profile of child protection had been increasing over this time due to press coverage of investigations into the deaths of children at the hands of their carers. The highest profile death due to child abuse is that of Victoria Climbié. This case and others will be discussed more fully in chapter 2 (section 2.2.5). Since 2006 there has been no published research to assess whether the training manual or increased availability of child protection courses has had any impact on the proportion of dentists that suspect cases of child abuse/ neglect but do not pass on their suspicions. In 2011, however, Harris et al (2011) published the results of their study "NHS dental professionals' evaluation of a child protection learning resource". This study evaluated the impact of "Child Protection and the Dental Team" with regard to the behaviours of NHS dentists in England. Although it showed that respondents felt it improved their knowledge it could not assess whether the gap between those suspecting child abuse/ neglect and those who actually refer cases had changed.



In addition to this there has been no published work in the United Kingdom investigating the oral health of vulnerable children. In this context “vulnerable children” are those children for whom a welfare concern has been identified. Other non-UK researchers have attempted to describe the oral health of groups of maltreated children. They demonstrated that children who are confirmed as having suffered abuse or neglect have a higher incidence of untreated dental caries and other oral problems (Greene et al., 1994; Olivan, 2003; Mezzich et al., 2007; Valencia-Rojas et al., 2008; Montecchi et al., 2009). Despite this no work has been done on whether the input from the dental profession would be useful to those other professionals who make decisions in child protection cases.

In Greater Glasgow and Clyde children for whom there has been an identified welfare concern are referred for comprehensive medical assessments as part of this information gathering process. At these clinics the attending children, along with their siblings, are not confirmed victims of abuse or neglect.

## **1.1 Research Questions**

### ***1.1.1 The dentists role in child protection***

What proportion of GDPs in Scotland have suspected cases of child abuse or neglect in their careers; do all suspected cases get referred and what factors influence this?

### ***1.1.2 Oral disease in vulnerable children***

Can oral assessments be integrated into comprehensive medical assessments and what is the prevalence of oral disease among children referred for comprehensive oral assessments between 2009- 2011?

## **1.2 Null Hypotheses**

Following publication of Child Protection and the Dental Team (Harris et al., 2006) plus an increase in the availability of child protection training for GDPs in Scotland, the gap between those GDPs suspecting and referring cases of child abuse or neglect will not have changed.

Children who are referred for a comprehensive medical assessment (CMA) will not have a higher dental caries rate than the general population.

Children who receive a comprehensive oral assessment will have no other clinical oral signs such as dental trauma, dental neglect and oral mucosal suspicious lesions (for example untreated oral candida infection or oral herpes).

## Chapter 2 Literature Review

### 2.1 The Past

#### 2.1.1 History

The role of the dentist in child protection has developed greatly over the past 50 years. This has coincided with changing global attitudes towards the treatment of children. Child abuse and infanticide have existed in society since ancient times and many justifications given for it (Radbill, 1968). Previously parents were left to decide how they would treat and discipline their children and it was unlikely that anyone (general public, health or state) would intervene. This began to change in 1874 in New York, when legal and social involvement in child protection began with a child called Mary Ellen (Schwartz and Woolridge, 1982). She was chronically abused but in the absence of any laws the police were powerless to help. Her case was eventually reported to the courts by The Society for the Prevention of Cruelty to Animals on the basis that Mary Ellen was a member of the animal kingdom. This led to the formation of the first Society for the Prevention of Cruelty to Children in New York in 1875. In the United Kingdom the Society for the Prevention of Cruelty to Children was not founded until 1884, nine years after this first society.

The medical professions' involvement in child abuse and child protection began with radiologist John Caffey in 1946. In his paper he observed that children with subdural haematomas sometimes showed changes in their long bones which were suggestive of previous trauma (Caffey, 1946). Following this paper more work was published (Silver et al., 1969) which suggested this sort of trauma in young children may have been wilfully inflicted by the child's carers. This led to the publishing of C. Henry Kempe's landmark paper in 1962, "The battered child syndrome". He described this syndrome as a clinical condition which should be considered in any child with "evidence of fracture of any bone, subdural haematoma, failure to thrive, soft tissue swellings or skin bruising, in any child who dies suddenly, or where the degree and type of injury is at variance with the history given" (Kempe et al., 1962). The publication of this paper led to the passing of laws in all states in the USA which required mandatory reporting of suspected cases of child abuse by health professionals (including dentists).

### 2.1.2 Types of abuse

From the 1970's onwards there have been many publications in the dental literature surrounding the dentists' role in child protection and the identification of child abuse. Many of these have concentrated on physical abuse of children. This is not surprising because as early as 1966 (Cameron et al., 1966) it was recognised that at least 50% of physically abused children have injuries affecting their head, face or neck, all areas readily visible during a normal dental examination. Studies of the prevalence of injuries to the head, face and neck of physically abused children have been repeated all over the world and it has been consistently shown that 50-75% of physically abused children have orofacial signs of abuse which would be obvious to a dental practitioner (Becker et al., 1978; Malecz, 1979; da Fonseca et al., 1992; Jessee, 1995; Cairns et al., 2005b). Orofacial signs of physical child abuse include bruising of soft tissues (especially those that do not overlie a bony contour), abrasions, multiple injuries, bruising of different vintage, scarring of the lips, dento-alveolar injuries, fractures, burns and "tattoo" injuries which reflect the shape of the offending object (figure 2.1).

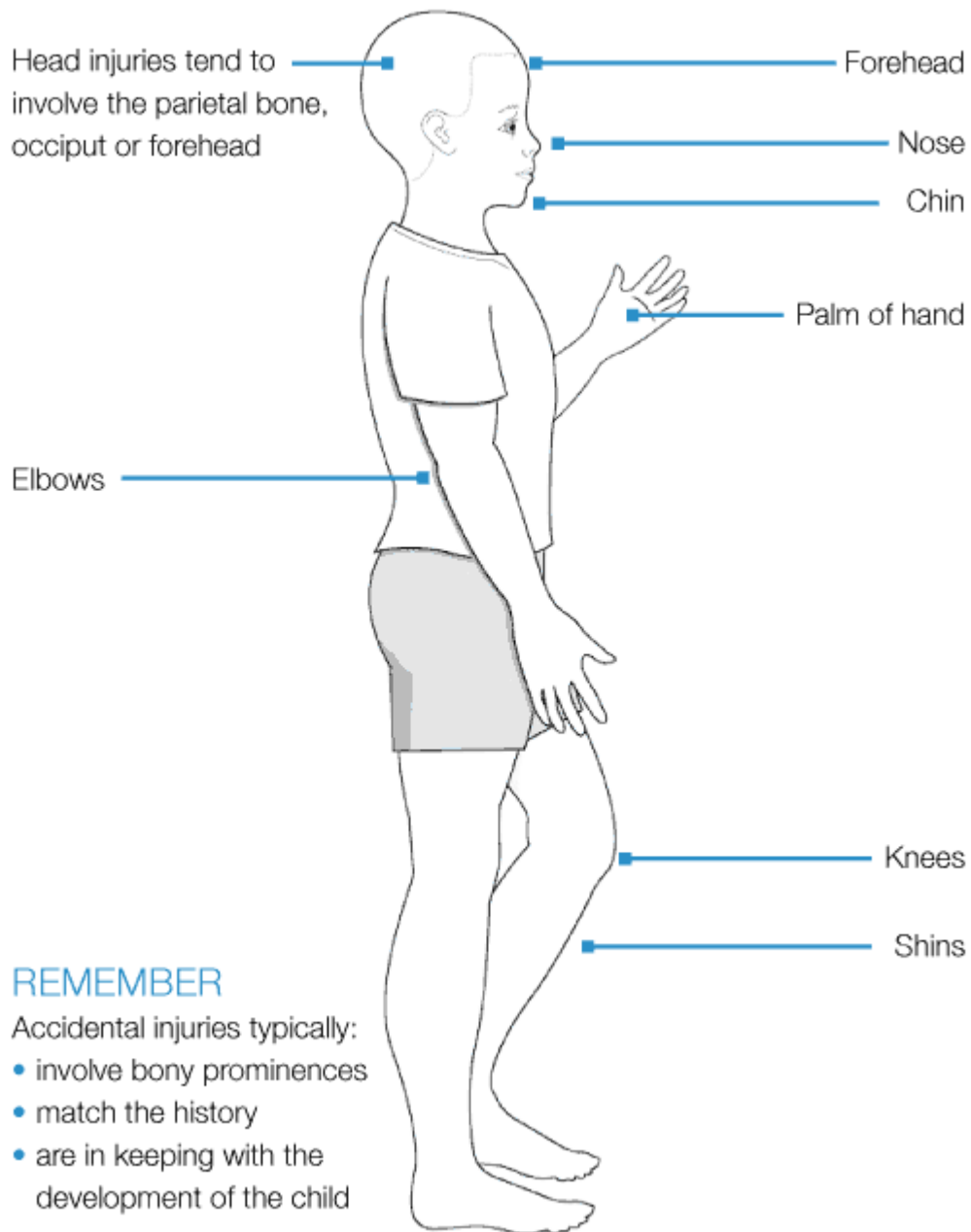


**Figure 2:1 Picture of "tattoo" type burn on a child's hand**

**"Tattoo" injuries reflect the shape of the object which caused it. In this picture a right angle shaped burn is obvious where the child's hand was forcibly held against the bar of a gas fire. (Courtesy of Professor R.R.Welbury)**

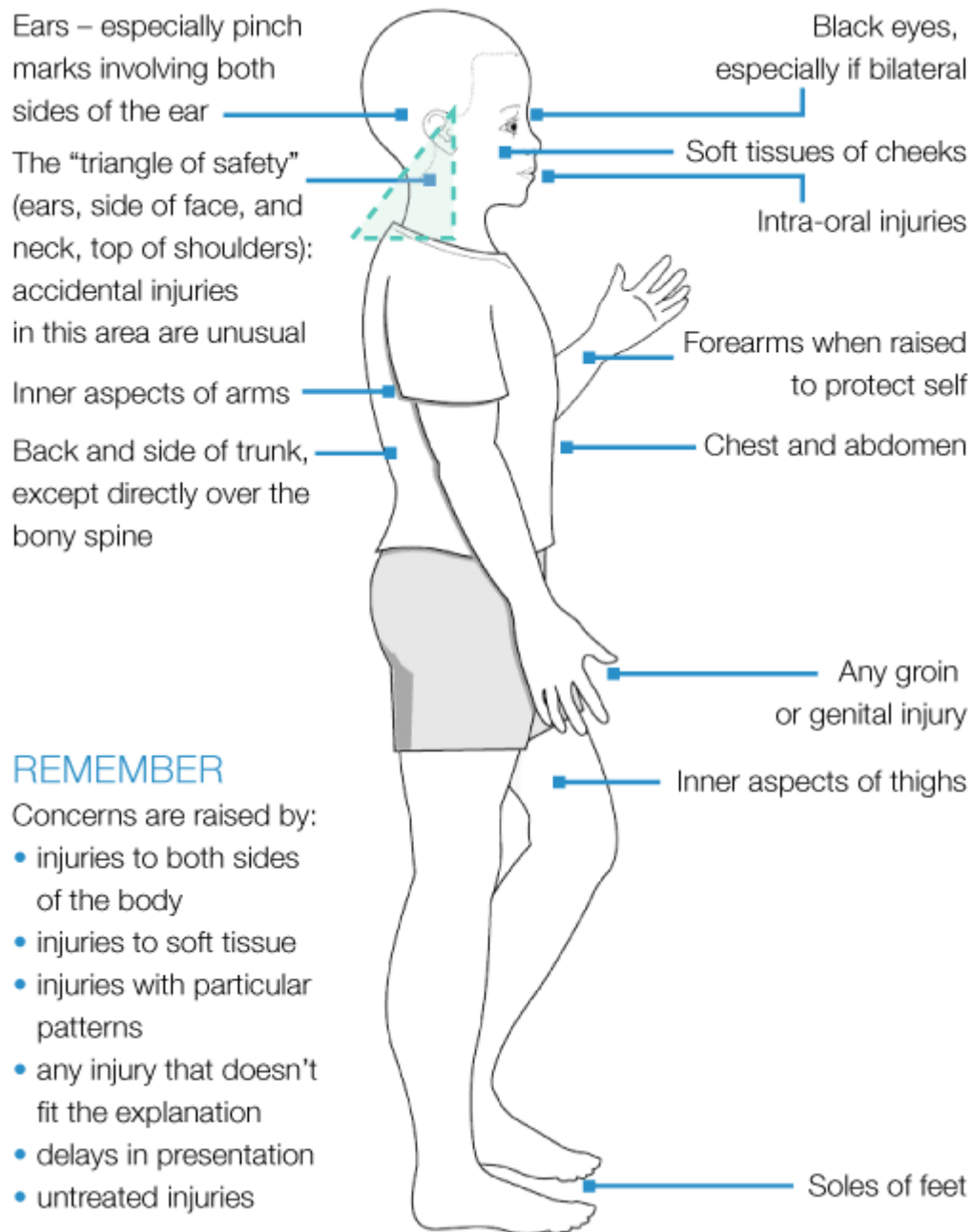
As many of these injuries can occur accidentally it is important for dentists to obtain detailed histories of injuries from parents/ guardians and the child themselves. If the explanation for the injury does not fit with the clinical picture then the dentist should have a high index of suspicion of child abuse. The site of

the injury is also important. Accidental injuries commonly involve bony prominences and should be in keeping with the development of the child, whereas injuries to soft tissues or injuries that would be unusual for the child's developmental stage are suspicious. The features of accidental and non-accidental injuries are illustrated in figures 2.2 and 2.3.



**Figure 2:2 Typical features of accidental injury.**

Figure reproduced with permission from Harris J, Sidebotham P, Welbury R et al. *Child protection and the dental team: an introduction to safeguarding children in dental practice*. COPDEND: Sheffield, 2006.



**Figure 2:3 Typical features of non-accidental injury.**

Figure reproduced with permission from Harris J, Sidebotham P, Welbury R et al. *Child protection and the dental team: an introduction to safeguarding children in dental practice*. COPDEND: Sheffield, 2006.

Physical abuse is not the only form of child maltreatment that dentists may have suspicions about. In England and Wales there are four recognised categories of child abuse: physical abuse; emotional abuse; neglect; and sexual abuse. In Scotland a fifth category, non-organic failure to thrive was also recognised. However, following National Guidance for Child Protection in Scotland published in 2010 it is no longer necessary to identify a category of registration relating to the primary type of abuse and neglect. Instead, the local authority should ensure the child's name and details are entered on the register, as well as a record of

the key areas of risk to the child (Scottish Government, 2010a). This is to stop any disagreements about the categories of registration preventing the placement of child on the child protection register. The purpose of the child protection register will be discussed in section 2.2.2.2.

Current literature suggests that dentists, as well as being well placed to detect physical abuse, should also be involved in the recognition of neglect (Harris et al., 2006; Harris et al., 2009a; Balmer et al., 2010). Neglect is defined as “the persistent failure to meet a child’s basic physical and/ or psychological needs, likely to result in the serious impairment of the child’s health or development” (HM Government, 2010). Physical neglect was defined in 1975 by ten Bensel and King (1975) as failure of a child’s caregivers to provide the basic physiological needs for the child including failure to provide adequate nutrition and clothing, proper medical care and a safe environment. Emotional neglect seems to be harder to define but Schwartz et al (1976) put it very simply as “lack of love and attention”. In 1981 a paper by Blumberg and Kunken (1981) stated that untreated dental decay may be the first sign of child abuse or neglect. Indeed the authors reported two cases where child abuse was identified following the dental diagnosis of “nursing bottle syndrome”. Many studies in the dental literature concerned with orofacial signs of abuse have looked at physically abused subjects only, and have not included cases of neglect. However neglect is just as serious and worrying as physical abuse. In a paper on fatal cases of child abuse and neglect in Denmark, Gregersen and Vesterby (1984) reported the cause of death in 4 children as neglect / malnutrition. Historically Badger noted that reporting of dental neglect as part of physical neglect was nearly non-existent in 1982. He suggested that the diagnosis of severe dental neglect does not require any additional training of dentists and gave some guidelines as to how to identify suspected neglect cases (Badger, 1982). In guidance from the National Collaborating Centre for Women’s and Children’s Health, commissioned by the National Institute for Clinical Excellence, they describe situations which may lead a professional to suspect or consider child abuse or neglect and they say neglect should be considered if parents have access to, but persistently fail to obtain treatment for their child’s tooth decay (National Collaborating Centre for Women’s and Children’s Health, 2009). The American Academy of Pediatric Dentistry (AAPD) defines dental neglect as the “wilful failure of parent or

guardian to seek and follow through with treatment necessary to ensure a level of oral health essential for adequate function and freedom from pain and infection” (American Academy of Pediatric Dentistry, 2005). The British Society of Paediatric Dentistry (BSPD) published guidelines on dental neglect in 2009. Their definition is “the persistent failure to meet a child’s basic oral health needs, likely to result in the serious impairment of a child’s oral or general health or development.” (Harris et al., 2009a) The use of “persistent” rather than “wilful” makes this definition more inclusive than the American definition.

Dentists may also come into contact with children who have been sexually abused. Although this type of abuse was recognised in the dental literature as early as 1975 (ten Bonsel and King, 1975) the role that dentists have in identifying it was not described until the 1980’s. The general features that the literature suggests dentists should be made aware of are the oral manifestations of sexually transmitted infections in children whose behaviour is withdrawn. Some of these manifestations may not be particular to sexual abuse. Fontana (1986) suggested that simple signs such as sudden changes in eating and sleeping patterns, nightmares, and being fearful of adults not previously feared are important in establishing a diagnosis of sexual abuse, however Fontana recognised that these are non-specific signs. Casamassimo (1986) devoted a whole article to child sexual abuse and the paediatric dentist. He listed the signs and symptoms of child sexual abuse that may alert a dentist as:

- A history of sexual assault
- Physical findings of venereal disease
- Pregnancy in a child younger than 12 years of age
- Direct reports from children

He suggested that a child’s preoccupations with sex, precocious sexual interest or indiscrete masturbatory activity are “second level indicators” of sexual abuse. Other authors have described this as an “age-inappropriate sexual knowledge”. Self harm and low esteem are also recognised as sequelae of child sexual abuse. In all such cases Casamassimo (1986) recommended referral to medical



colleagues for complete examination. Dentists should however have knowledge of the oral appearances of sexually transmitted infections and what tests are required to confirm or refute their differential diagnoses. Herpes simplex virus (HSV) can cause primary herpetic stomatitis. Herpes simplex virus type 1 (HSV-1) is the most common cause and is contracted early in life; however it can also be caused by herpes simplex virus type 2 which is transmitted sexually and can cause severe oropharyngeal infection (Scully, 2008). If a dentist were concerned about the presentation in one of their child patients then a viral study may be indicated. This can include culture, electron microscopy, polymerase chain reaction detection or immunodetection (Scully, 2008). Oral papillomas may be caused by various strains of the human papilloma virus and a few of these viral strains can be sexually transmitted between genital and oral sites. The clinical presentation is not distinguishable between the viral strains, therefore if a dental practitioner were concerned about sexual abuse in a child who presented with oral papillomas then after excision of the lesions they can be sent for viral typing or immuno-staining (Lewis and Jordan, 2004). Other oral appearances of sexually transmitted infections may include ulcers due to gonorrhoea or syphilis. Syphilis may present in the oral cavity as primary lesions (painful ulcers associated with enlargement of the cervical lymph nodes), secondary syphilis (multiple mucous patches which are slightly raised and covered by a grey - white pseudomembrane accompanied by enlarged cervical lymph nodes which are rubbery in texture), or tertiary syphilis (gummas mainly occurring in the hard palate or tongue) (Millard and Manson, 2000). Child sexual abuse is thought to be the most under-reported type of child abuse and this detail was published in the dental literature by Waldman in 1993. In his article he quoted shocking statistics, one of the most notable being that 61% of the 12.1 million women who had experienced forcible rape in America had been victimised before they were eighteen years old and 4 million women had been raped at the age of ten or under (Waldman, 1993). In addition to the presence of the previously discussed infections the guidance document "When to suspect child maltreatment" also states that child sexual abuse should be considered in children with hepatitis B, hepatitis C or HIV unless there is clear evidence of mother-to-child transmission during birth, non-sexual transmission from a member of the household or blood contamination (National Collaborating Centre for Women's and Children's Health, 2009). This document also reminds dentists that if they discover any of

their child patients aged 13 years or younger are pregnant this may also be a sign of child maltreatment and they would have to share their concerns (National Collaborating Centre for Women's and Children's Health, 2009).

Emotional abuse impacts on a child's mental health, behaviour and self-esteem and is now recognised as a component in all categories of abuse (HM Government, 2010). Signs and symptoms of emotional abuse may be noticed by dentists and include babies who are demanding / clingy or irritable, and who may also have feeding difficulties and cry a lot. In school aged children there may be developmental delay, soiling or wetting problems, poor behaviour, and non-attendance at school or rejection by their peers. Teenagers who have suffered emotional abuse may exhibit problems with drugs / alcohol, behavioural problems, self harming, eating disorders or depression (HM Government, 2010).

Child abuse can occur in all classes and ethnicities although it is often more reported in poorer families. Kempe's formula for assessing those at risk of child abuse involved there being: something wrong with the parents; something wrong with the marriage; something wrong with the child; life stresses; and parents who have no access to lifelines. Parental factors which may increase the risk of child abuse include: young parents of low intelligence (who have often been abused themselves); mother divorced/single cohabiting with person responsible for the violence; disability; criminal record; and emotional immaturity (Kempe et al., 1962). Drugs, alcohol, poverty, social isolation, unemployment and marital stress may all contribute (HM Government, 2010). Where the child is concerned, crying, soiling, disability and failed expectations may be contributing factors. Additionally premature babies and those that are the result of an unwanted pregnancy may be at higher risk of abuse (Kempe et al., 1962; HM Government, 2010). A study by Sullivan and Knutson (2000) showed that disabled children were 3.4 times more likely to have been maltreated than their non-disabled peers. Wescott and Jones (1999) concluded that disabled children are judged more vulnerable because they experience greater physical and social isolation, a lack of control over their life and bodies, greater dependency on others, and problems in communication.

### **2.1.3 Domestic violence**

Domestic Violence is defined by the United Kingdom Home Office as “Any incident of threatening behaviour, violence or abuse (psychological, physical, sexual, financial or emotional) between adults who are or who have been intimate partners or family members, regardless of gender or sexuality”(Home Office, 2009). Research has shown a link between domestic violence and child abuse. In the 1990’s it was shown that children who had been exposed to domestic violence were more likely to have behavioural and health problems (Jaffe and Suderman, 1995) and in 60% of child abuse cases where the father was the perpetrator, the mother was also abused (Mullender et al., 1998). In addition the fact that one in four women experience domestic abuse in their lives (HM Government, 2010) means that there is a huge proportion of children who may be affected. In “Its Everyone’s job to make sure I’m Alright” domestic violence was noted to be a feature in over a third of child protection cases in Scotland (Scottish Executive, 2002).

The Scottish Government published “Tackling Violence Against Women: A Review of Key Evidence and National Policies” in 2010. This document tied together both a review of the evidence of violence against women and an exploration of the National Policy Context. The National Policy Context included a look at current initiatives and training in tackling domestic abuse (Scottish Government, 2010b). In Scotland in 2009 -2010 there were 51,926 recorded incidents of domestic abuse with 84% of incidents involving a male perpetrator and female victim (Scottish Government, 2010c).

Under the framework of the “National Domestic Abuse Delivery Plan for Children and Young People” (Scottish Government, 2008a) a number of initiatives have been developed. These include:

- Introduction of routine enquiry of domestic abuse in NHS settings which has six priority settings (maternity, mental health, substance misuse, community nursing, accident and emergency, and sexual and reproductive health).

- Building on the court-mandated Caledonian System which involves a program for adult male offenders, services to women partners, ex-partners and children, training for Criminal Justice staff, and staff in women and children's services.
- Use of a toolkit to encourage and support a review of Criminal Justice Agencies across Scotland
- Children Experiencing Domestic Abuse Recovery (CEDAR) pilots which are community-based models of group work for children and their mothers affected by domestic abuse.

Recent initiatives for dentists to tackle domestic abuse have been introduced in Scotland by a charity called Medics Against Violence. They have produced practice notes for dentists to use in identifying and supporting patients who have experienced domestic violence (Medics Against Violence, 2010). These are based on an American model called AVDR (asking, validating, documenting and referring) (Gerbert et al., 2002). This involves a dentist routinely asking about abuse using non judgmental wording and tone of voice, providing validating messages that take the blame off the victim, documenting presenting signs and symptoms, and referring the victim to community advocates.

## **2.2 The Present**

### ***2.2.1 Legal frameworks***

In Scotland the legislative framework governing child protection started with the UN Convention on the Rights of the Child 1989 (United Nations, 1989). The basis for children's rights are children's needs; because children are vulnerable and cannot protect themselves, and their parents are not always in a position to protect them either, the state has an obligation to ensure that their needs (see table 2.1) are met.

**Table 2:1 Needs of children**

Summarised from “Child Protection Reader: Recognition and Response in Child Protection” (Royal College of Paediatrics and Child Health, 2007)

<i><b>Physical needs</b></i>	<i><b>Social, economic and cultural needs</b></i>	<i><b>Psychological and emotional needs</b></i>
Shelter	Knowledge of and respect for own language, religion and culture	Opportunities for play
Health care	Stable social and economic environment	Access to education
Water and sanitation	Recognition and respect for emerging competencies	Stimulation
Protection from environmental pollution	Access to appropriate guidance and support	Access to age appropriate information
Adequate food	Respect for privacy and confidentiality	Opportunities to be listened to and respected
Adequate clothing	Opportunities for friendship	A family environment, whether biological or a substitute family
Protection from exploitation and abuse	Opportunities for play	Access to appropriate guidance and support
Protection from violence	A family environment, whether biological or a substitute family	Respect for privacy and confidentiality
	Access to education	Recognition and respect for emerging competencies
	Access to age appropriate information	

Following the Children Act (1989), the Children (Scotland) Act 1995 (Scottish Office, 1995) had three main themes:

- The welfare of the child is paramount
- No court or Children’s Hearing should make an order or supervision requirement unless it is in the child’s best interest
- The child’s views, taking appropriate cognisance of age and understanding, should be taken into account where major decisions are made about his or her future

This act also sets out what parental responsibilities are, namely:

- To safeguard and promote the child's health, development and welfare
- To provide direction until age sixteen and guidance until age eighteen
- To maintain regular contact with the child until he/she is sixteen (if the child is not living with the parent)
- To act as the child's legal representative until the child is sixteen

The last point is, however, subject to the Age of Legal Capacity (Scotland) Act 1991 (HM Government, 1991) which provides that a person under sixteen shall have legal capacity to consent on their own behalf where he or she understands the nature and possible consequences of the procedure or treatment.

The next pieces of legislation to affect child protection in Scotland were the Human Rights Act 1998 (HM Government, 1998) and "Protecting Children A Shared Responsibility", the National Guidance for Scotland, which was also published in 1998 (Scottish Office, 1998). A Child Protection Audit and Review entitled "It's everyone's job to make sure I'm alright" was undertaken by the Scottish Executive and the findings published in 2002 (Scottish Executive, 2002). The review audited the work of police, social work, education and health services and included views of children, young people, parents and the public. This work included 17 recommendations for child protection in Scotland. Further to this the Protection of Children (Scotland) Act (HM Government, 2003) was published in 2003 which plugged a gap in existing safeguards that let unsuitable people move from one child care post to another if they had not been convicted of an offence.

Shortly after this time work began on the "Getting It Right for Every Child" (GIRFEC) approach. Work on this began in NHS Highland in Scotland in 2004 and gradually this way of working has been rolled out across Scotland (Scottish Government, 2008b). The existing National Guidance then required updating in response to these legislative and practice developments. This led to the publication of the National Guidance for Child Protection 2010 (Scottish Government, 2010a) which also incorporated the Scottish Governments Guidance "Protecting Children and Young People: Child Protection Committees (2005)"

(Scottish Executive, 2005). The key changes in this document were: the categories of registration for children placed on the child protection register were removed; the registration of unborn children was brought in; the definition of child abuse was broadened beyond familial abuse and timescales for child protection processes were specified.

### **2.2.1.1 Duties to protect**

The Police (Scotland) Act 1967 (HM Government, 1967) stipulates general functions and jurisdiction of police in Scotland. It is the duty of constables of a police force to guard, patrol and watch so as to:

- (i) prevent the commission of offences;
- (ii) preserve order; and
- (iii) protect life and property.

Additionally it is the duty of the constables of a police force, where an offence has been committed, whether within or without the police area for which the police force is maintained, to take all such lawful measures, and make such reports to the appropriate prosecutor, as may be necessary for the purposes of bringing the offender, with all due speed, to justice.

As mentioned previously The Children (Scotland) Act 1995 (Scottish Office, 1995) is one of the primary pieces of legislation providing the range and scope of local authority intervention in the lives of children and families. The duties of the local authority within this legislation are mainly undertaken by statutory social work services.

The Social Work (Scotland) Act 1968 (HM Government, 1968) provides the primary mandate for social work intervention in Scotland. It is the legislation that creates the duty under section 12 to “promote social welfare” . While this has been revised and added to over the years the overarching mandate remains that it is the duty of the local authority to ensure that such services are made available in their area.

Part 2 of the Local Government in Scotland Act 2003 (Scottish Executive, 2003a) includes details of the duty on local authorities to establish and maintain a process of community planning which will include the scope for developing Child Protection Committees. Part 3 of this Act sets out the power of local authorities to enhance wellbeing and this is relevant to the establishment of Child Protection Committees.

Education Services also have duties to protect children which are set out in The Education (Additional Support for Learning) (Scotland) Acts in 2004 and 2009 (Scottish Executive, 2004a; Scottish Government, 2009). They have a duty to provide such support as is necessary when children have additional support needs and to help them benefit from school education. They also have a duty to provide coordinated support plans for children when necessary.

### ***2.2.2 Child protection systems in Scotland***

The protection of children in Scotland is a multi-agency issue. This has been reflected in both the content, and indeed the titles, of various guidance documents produced by the Scottish Government (Scottish Office, 1998; Scottish Executive, 2002). It is therefore essential that not only are all the agencies involved, but the individuals within those agencies know and understand what their roles are regarding child protection. In 2010 a National Framework for child protection was published by the Scottish Government and what follows is a summary of the information in that guidance document (Scottish Government, 2010a).

“Child protection” means protecting a child from child abuse or neglect. The abuse or neglect does not have to have already occurred; it is enough that there is a risk of significant harm to the child. Child protection procedures may result in a Child Protection Plan being drawn up for the child, but this is not always the result as it may not be necessary in every case.

#### **2.2.2.1 Roles and responsibilities in child protection**

##### ***2.2.2.1.1 The general public***



Members of the general public have an obligation to pass on concerns or information about child abuse and neglect to statutory agencies. It should be made clear to the public that confidentiality cannot be guaranteed and that services have a responsibility to share information when there are concerns about child abuse or neglect.

#### ***2.2.2.1.2 Chief Officers groups***

These groups are made up of chief constables and chief executives of health boards and local authorities. They are responsible for ensuring that the agencies they represent work effectively to protect children and young people. They should ensure this work is both intra and inter-agency. They are also responsible for making the most of the involvement of the agencies that are not under their direct control. These agencies include the Scottish Children's Reporter Administration, the Crown Office and the Procurator Fiscal Service. Chief Officers groups are responsible for leading as well as scrutinising their child protection services. In addition to overseeing the commissioning of child protection services they are accountable for the work of the child protection services and their effectiveness. They are advised by Child Protection Committees.

#### ***2.2.2.1.3 Child Protection Committees***

Child Protection Committees are local inter-agency partnerships. They are responsible for the design, development, publication, distribution, dissemination, implementation and evaluation of child protection policy and practice in their local area and across Scotland. Their role is to provide individual and collective leadership and direction for the management of child protection services across Scotland. Each Child protection Committee has a lead officer. As part of their training remit they should have resources in place to deliver inter-agency child protection training.

#### ***2.2.2.1.4 Local authority social work services***

Local authorities have a duty to protect and support the welfare of children in their area. When a local authority receives information about concerns regarding

a child's welfare it is the social work services that will make enquiries and give any information to the Children's Reporter. The document "The Role of the Registered Social Worker in Statutory Interventions: Guidance for Local Authorities" states that for children who are in danger of significant harm, serious exploitation or who are in need of protection a registered social worker will be held accountable for:

- carrying out enquiries and making recommendations where necessary as to whether or not the child or young person should be the subject of compulsory protection measures
- implementing the social work component of a risk management plan and taking appropriate action where there is concern that a multi-agency plan is not being implemented
- making recommendations to a children's hearing or court as to whether the child should be accommodated away from home

Children and family social workers also facilitate or provide access to additional support services for vulnerable children and families on a daily basis. In child protection social workers also usually act as the Lead Professional for children subject to a Child Protection Plan.

Social work services also co-ordinate multi-agency risk assessments, arrange Child Protection Case Conferences and maintain the Child Protection Register.

#### ***2.2.2.1.5 Education services***

Local authority education establishments including schools, nurseries and family centres have responsibilities for identifying and responding appropriately to concerns regarding child abuse or neglect. Teachers and nursery staff have a high level of day to day contact with children and may be the first people to recognise signs and symptoms of abuse or neglect. They should share any concerns with social work services or the police through established reporting mechanisms. Children may also see education staff as trusted adults and they may well have a role in supporting children. They may participate in Child

Protection Case Conferences and core groups. Education providers are also important in equipping children with the knowledge and skills to keep themselves and others safe, as set out in the Curriculum for Excellence.

#### **2.2.2.1.6 Police**

The police have a duty to protect the public. If they believe a criminal offence has taken place then they will investigate on behalf of the Procurator Fiscal and provide them with the information they need to decide whether a criminal prosecution should take place. The police will refer a child to the Children's reporter if they believe they are in need of a compulsory supervision order.

Under the Children (Scotland) Act 1995 (Scottish Office, 1995) the police have a specific power to ensure the immediate protection of children in an emergency where they believe the child is suffering, or is at risk of suffering significant harm. As these are emergency procedures, if a child is removed by police to a place of safety then the local authority will have to seek a Child Protection Order to ensure the continued safety of the child. The Police may attend and contribute to child protection case conferences if they hold relevant information.

#### **2.2.2.1.7 Health services**

All health practitioners have a duty to work with the statutory agencies when there are abuse or neglect concerns about a child or young person. This is true not only for health professionals who work with children, but also for those who work in adult services. In addition to this, health practitioners have the responsibility of looking after their patients' physical and psychological well-being. They could be the first person who raises concerns about a suspicion of child abuse or neglect. As well as raising concerns, different professionals within the health services may also be involved in investigating concerns of suspected abuse and neglect. The health services are also often integral to Child Protection Plans. All NHS services should have a designated nurse for child protection or a nurse consultant or lead nurse and designated child protection advisory staff. These staff members should be experienced child protection professionals with a health background. All staff working in healthcare, whether professionals or

support staff, should be aware of their responsibilities in identifying and sharing concerns about suspected cases of child abuse or neglect. They should know who to contact about their concerns and when to share information with other agencies.

The Scottish Government's National Guidance specifically covers the roles and responsibilities of dental care practitioners. In keeping with the General Dental Councils policy the Scottish Government Guidance agrees that the dental team should have the knowledge and skills to be able to identify concerns about a child's welfare and know how and with whom to share that information. The National Guidance also recognises that dental care practitioners often come into contact with vulnerable children and are in a position to identify possible child abuse or neglect from their examination of oral injuries or oral hygiene (Scottish Government, 2010a).

#### ***2.2.2.1.8 Scottish Children's Reporter administration***

Children may be referred to the Reporter because of concerns about their welfare or to address their offending behaviour. Anyone can refer a child and the Reporter will conduct an investigation into the case. This includes an assessment of the evidence of the grounds for referral, how well the child and family are co-operating with agencies and the extent of concerns over the child's welfare and behaviour. Information for this assessment may come from social services, education services and health services. If the Reporter decides there is sufficient evidence to require supervisory measures then the child will be called to a Children's Hearing. The investigation can take place at the same time as a criminal investigation or a criminal court case. The Reporter also has a role as a legal agent at Sheriff Court. It is the Reporter's responsibility to lead the evidence (take witnesses through their evidence) at court.

#### ***2.2.2.1.9 Procurator Fiscal services***

The prosecution of crime in Scotland is the responsibility of the Crown Office and the Procurator Fiscal. Their other responsibilities include investigating sudden or suspicious deaths and complaints against the police. When it comes to child protection the police submit their report of their criminal investigation to

the Procurator Fiscal who then decides if criminal proceedings should occur. The procurator Fiscal will consider whether there is enough evidence in the case and whether it is in the public interest. Where they find there is enough evidence then the Procurator Fiscal will also take into account how serious the offence is, the time since the offence occurred, the interests of the victim and witnesses, and any previous convictions as well as other relevant facts of the case.

Where there is enough evidence it is the responsibility of the Procurator Fiscal to decide on what action is to be taken. This may include prosecution, an alternative to prosecution, or no action. In cases which will come before a jury it is the responsibility of the Procurator Fiscal to interview the witnesses and gather and review the evidence, including forensic evidence, before the Crown Counsel makes the final decision on whether to prosecute.

#### **2.2.2.1.10 *Voluntary and community organisations***

Voluntary and community organisations may also be known as “The Third Sector”. They have a large role in engaging with, and improving outcomes for vulnerable children and young people. The organisations in this sector should all be aware of when and how to contact the statutory organisations for help when they are concerned about a child. Recently there has been a partnership between Children 1<sup>st</sup> and sportsscotland to produce a document called “10 Steps to Safeguard Children in Sport”(Children 1st and sportsscotland, 2012) which is based on a collection of policy and procedure documents to give sports clubs and organisations a template to adapt to their own needs. In addition all major faith denominations in Scotland employ professional staff to advise their church on child protection matters.

#### **2.2.2.2 Child Protection Register**

The Child Protection Register is a central register of all children who are subject to an inter-agency Child Protection Plan. At the end of July 2011 there were 2571 (1282 boys) children on the Child Protection Register in Scotland (Scottish Government, 2012). It is the responsibility of every local authority to maintain this register. The register provides a central resource for practitioners concerned about a child’s welfare but it has no legal status. The decision to

place a child on the Child Protection Register is taken after a Child Protection Case Conference where there are reasonable grounds to believe or suspect that a child has suffered, or will suffer significant harm from abuse or neglect. The local authority places the child's name and details on the register as well as the key areas of risk for the child. The child's parent or carers, as well as the child if they are able to understand, should be informed about the information kept on the register. This should be done orally and in writing.

Children's details do not remain indefinitely on the Child Protection Register but may be removed if and when it is decided at a Child Protection Case Conference that the risk of harm to the child has been reduced enough that a Child Protection Plan is no longer required. This does not however mean that support is no longer available to the child and their family and the Child Protection Plan that was in place may become a "Child's Plan" following deregistration.

The Child Protection Register is maintained in each local authority by social work services and by an appointed person known as "The Keeper of the Child Protection Register". It is held securely and separate to case records. There should be protocols in place in each local area to ensure that the appropriate professionals know who can access the Child Protection Register and it should be available twenty-four hours a day. A list of Keepers of the Child Protection Register is maintained by the Scottish Government.

### **2.2.2.3 Child Protection Case Conferences**

Different types of child protection meetings may take place when deciding how best to protect a child. These include Child Protection Case Discussions, Child Protection Case Conferences and Core Group Meetings.

Child Protection Case Discussions are interagency meetings to share information where there are child protection concerns. This allows the agencies to explore areas which may need to be clarified and the strengths within a family, as well as their level of cooperation with the various agencies, can be discussed. Any support that the family or child requires should be identified and a plan of intervention is agreed which may include organising a Child Protection Case Conference.

A Child Protection Case Conference may take place after a case discussion, or after an inter-agency child protection investigation, or if urgent protective action for the child has been required. The case conference provides an opportunity for agencies to look at information about allegations or suspicions of child abuse / neglect and also to look at the outcomes of inquiries. They also help to ensure that plans for families properly protect children or young people from harm. There are four types of Child Protection Case Conference:

- Initial Child Protection Case Conferences consider circumstances of children about whom there are serious welfare concerns but who are not on the Child Protection Register
- Review Child Protection Case Conferences review the circumstances of children whose names are on the Child Protection Register
- Pre-birth Child Protection Case Conferences consider both the risk of harm to unborn children and the future risk to these children after they are born
- Transfer Child Protection Case Conferences occur when a family moves to another geographical area and arrangements to transfer the case are required

Core Group Meetings consist of a small group of inter-agency professionals who are heavily involved with the family. They meet regularly with the parents or carers to review progress and arrange to implement the child protection plan.

### ***2.2.3 Court systems in Scotland***

The following information is taken from a Court Skills Training day run by the Child Protection Unit in Glasgow as well as information from the Law Society (Law Society of Scotland, 2012) and Scottish Courts (Scottish Court Service, 2012) websites. In Scotland the Court system is divided into two different systems namely the Civil Court System and the Criminal Court System. Civil Law is split into Public Law and Private Law. Private Law is concerned with the relationships between private individuals and / or organisations. In Scotland the

Children's Hearing System operates under Civil Law. Criminal Law is concerned with maintenance of peace and order of community and prosecution and punishment of crime. The state determines what criminal behaviour is and, through the Crown Office, it is responsible for prosecuting criminal cases in Scotland. The Procurator Fiscal bases decisions to prosecute alleged criminal offences on both public interest and sufficiency of evidence.

### **2.2.3.1 Civil vs Criminal Law**

In Civil Law a person seeks to enforce a right or a remedy, whereas in Criminal Law the Crown seeks to prove the accused has committed an offence. The standard of proof is also different between Civil and Criminal Law. In Criminal Law the standard of proof is beyond reasonable doubt but in Civil Law it is on the balance of probabilities. It can be said, therefore, that the standard of proof is much higher in Criminal Law. Additionally in Civil Law hearsay evidence is permitted and corroboration is not required, however in Criminal Law hearsay is not permitted and corroboration is required (corroboration means at least two sources of evidence to establish a fact). Finally in Civil Law the perpetrator does not need to be identified unlike Criminal Law where it is a requirement.

### **2.2.3.2 The Adversarial system**

It is important to know that the court procedures are not concerned with establishing the "truth" and they are also not an investigatory process aiming to discover the facts of the case. In court the Judge applies the law to the contest and decides the case on the basis of legal arguments. The purpose of the case is to test the evidence against the standard required and decide what can be proved or disproved (to whatever the standard of proof is). The testing of evidence is through cross examination of witnesses.

### **2.2.3.3 The Children's Hearing**

To understand where the Children's Hearing stands within the court system in Scotland it is important to understand some of the Judicial System. As well as being split into Civil and Criminal Courts the courts and tribunals are separated into inferior and superior courts. In the Civil Courts the most inferior are tribunals. Tribunals are less formal than courts. They exercise quasi judicial



functions but are not technically courts of law. They are presided over by lay persons but sometimes have legally qualified chairpersons. In the hierarchy of Civil Courts the next one on the ladder is the Sheriff court, followed by the Court of Session and the House of Lords. From any one of these courts an appeal may also be made to the European Court of Justice.

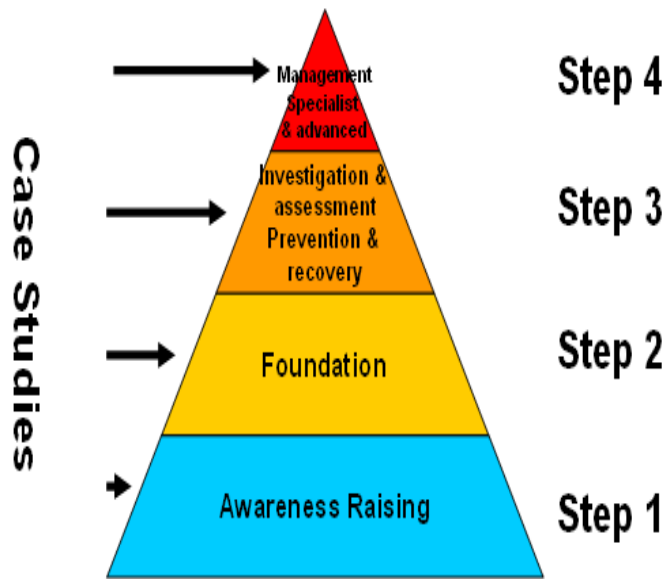
The Children's Hearing is an example of Tribunals in Scotland. As such it is presided over by lay members of the public. The Reporter (Reporter to the Children's panel) brings grounds for a case. The Hearing can then only proceed where the grounds are accepted by the relevant persons or child. Where the grounds are not accepted the Reporter must make an application to the Sheriff Court to find the grounds established. Only where grounds are established can the Hearing proceed to make a substantive decision.

The Hearing decides on what course of action is in the child's best interests and is usually based on reports from social services, education, and sometimes health. The child's circumstances are fully discussed with the parents, child or young person, and other relevant professionals or representatives before a decision is reached.

Supervision requirements are the most common form of compulsory supervision made by Children's Hearings. They vary from case to case but may require either supervision of a child at home by a social worker or may require the child to live away from home for a while. Often however no compulsory means are required because the family are already working with services or the incident was entirely out of character.

#### ***2.2.4 Training available in Scotland for dentists***

Child protection training opportunities have increased in Scotland over recent years. Following the publication of "Protecting Children and Young People: Framework for Standards" by the Scottish Executive in 2004 all training is now tiered (Scottish Executive, 2004b). This is illustrated in the diagram below which is taken from the training portfolio document available from the Child Protection Unit of NHS Greater Glasgow and Clyde (NHS Greater Glasgow & Clyde Child Protection Unit, 2009).



**Figure 2:4 Diagram representing levels of child protection training available**

In NHS Greater Glasgow and Clyde this includes:

- Level 1 - Awareness Raising / Induction
- Level 2 - Foundation Level (formerly Basic Awareness)
- Level 3 - Investigation and Assessment

Prevention of Recurrence and Recovery

- Level 4 - Managing Child Protection

Advanced or Specialist Development

The following is a summary of information taken from the Child Protection Unit NHSGGC Training Portfolio (NHS Greater Glasgow & Clyde Child Protection Unit, 2009).

Awareness raising (level1) is for all staff in NHS Greater Glasgow and Clyde and provides a basic overview of child protection including roles and responsibilities of staff, where to access support and advice, a brief overview of the legislative frameworks and what should cause concerns. Foundation is the next level and is

available to all NHSGGC staff who would then either progress onto level 3 and also those who do not work directly with children and families on a regular basis. In the foundation course the level 1 training is revised in more detail as well as giving more information on confidentiality and information sharing, the referral process, definitions of abuse, signs and symptoms and roles and responsibilities.

Investigation and Assessment is the title of the level 3 training and this training is run on a modular basis. There are currently 14 different level 3 training modules available for staff members that regularly work directly with children or families. These cover a wide range of topics from neglect, sexual abuse, and parents with learning difficulties to record keeping, court skills, risk assessment and learning from enquiries.

Level 4 training is advanced or specialist training and is aimed at those who provide advice, training or specialist opinion in the area of Child Protection for other staff in health services. These can range from University courses including post graduate certificates in child protection and Masters in Science in Child Care and Protection to courses run by the Royal College of Paediatrics and Child Health.

In addition to this the NHS Knowledge and Skills Framework (NHS KSF) was introduced in 2004 (Department of Health, 2004). It sets out the knowledge and skills which all NHS staff need to apply in their work to deliver quality service. It is one of three key strands in Agenda for Change. There are 6 key dimensions in the KSF which are applicable to every role in the NHS with another 24 dimensions which are specific to some roles but not all. Child protection is mentioned in Core Dimension 3 - Health, Safety and Security and Dimension HWB3- Protection of Health and Wellbeing. This benefits the individual by enabling them to access appropriate learning and development and also benefits organisations by allowing them to organise learning and development across staff groups. The annual review and personal development planning that occurs as part of KSF means that individuals should be able to access the appropriate level of child protection training for their role within the NHS.

Many of the reports following high profile child protection cases have demonstrated that improved inter agency working will be essential to improve outcomes. In light of this the local Area Child Protection Committees (ACPCs)



and police profiles then the entire picture remains hidden. Findings of the dental team may also be very important in building up a case and suspicions must be shared. Child protection is everyone's responsibility and every person who works with children has that personal responsibility.

Kennedy McFarlane was a little girl from Dumfries in Scotland who died at the hands of her stepfather. Following Kennedy's death, Jack McConnell (Minister for Education) commissioned a national audit into child protection in Scotland- this led to the publication of "It's everyone's job to make sure I'm alright" (Scottish Executive, 2002). This included seventeen recommendations to improve child protection in Scotland, the very first recommendation being that "all agencies should review their procedures and processes and put in place measures to ensure that practitioners have access to the right information at the right time"

Caleb Ness was born in July 2001 in Lothian in Scotland and died 11 weeks later as a result of brain injuries due to shaking. Following this The Criminal Justice Scotland Act 2003 (Scottish Executive, 2003b) has made it illegal to shake a child, hit them anywhere on the head, or hit them with objects.

In 2007 Baby Peter died aged 17 months old. He, like Victoria, was from the Haringey council area and had been known by services in the area for 8 months and over this period of time he sustained over 50 injuries.

Brandon Muir was born on the 2<sup>nd</sup> of April 2006 and died on 16<sup>th</sup> March 2008 in Dundee. He was killed by his mother's heroin addicted boyfriend who had only been involved with the family for 3 weeks. In the report into his death it was stated that;

"In the short three week period when Cunningham resided with Heather Boyd and her children, the authorities, while active in personal engagement with the family, were not able to assemble, process or assess all the available information on Boyd or Cunningham. The Inquiry revealed gaps and inaccuracies, some caused by pre-existing systems, others by a lack of available resource" (Hawthorn and Wilson, 2009).

In December 2011 Kimberley Hainey was convicted of murdering her son Declan in Paisley. Declan's body was found by Police in March 2010 and it was estimated that he had been dead for months before he was found. He was eventually found after Declan's GP and health visitor raised concerns over missed immunisations. In the significant case review it was noted that there had been 19 unsuccessful attempts to see Declan before his body was discovered (Renfrewshire Council, 2010). It also demonstrates that 31 members of staff were involved in this case, 14 of whom were health professionals. This illustrates the importance of sharing information. In Lord Woolman's sentencing statement he stated that Declan's mother Kimberley was convicted of "wilfully ill-treating and neglecting Declan, of failing to provide him with adequate nourishment and fluids, of leaving him alone unattended for excessive periods of time; and of failing to seek and provide medical care and aid for him. In addition she took significant steps to cover up what happened" (Renfrewshire Council, 2010). Kimberley Hainey had lied to her family and friends as well as to the authorities but was eventually brought to justice. In the significant case review it was recommended that NHSGGC should introduce an "Unseen Child" protocol.

### ***2.2.6 Dental practitioners and child protection***

As mentioned earlier, Cairns et al in 2005 showed that although 29% of dentists in Scotland had suspected child abuse only 8% had referred these cases on to the appropriate authorities (Cairns et al., 2005a). This disparity between those suspecting the need for child protection services versus those who actually refer these cases has also been described in the UK by Welbury et al (2003) with regard to General Dental Practitioners and by Harris et al (2009b) for dentists and dental care professionals with an interest in paediatric dentistry. The phenomenon of under-reporting is an international problem and has been shown in published work from the USA (Saxe and McCourt, 1991; Von Burg and Hibbard, 1995; Jessee, 1999), Australia (John et al., 1999; Kilpatrick et al., 1999), Jordan (Owais et al., 2009), Greece (Laud et al., 2012) and Denmark (Uldum et al., 2010).

In 2006 all dental practices in Scotland were sent a document entitled "Child Protection and the dental team" (Harris et al., 2006). This is a training manual for the dental team aiming to improve their knowledge on the signs and

symptoms of child abuse and neglect along with information regarding appropriate generic referral protocols. In addition to this, NHS Education for Scotland has funded Scotland wide inter-agency postgraduate training courses on the topic of child abuse and neglect. Inter-agency training involves participants from various health disciplines as well as people from education and social services. Training in Child Protection is also a topic in vocational training/dental foundation programmes and forms part of the undergraduate dental curriculum in UK dental schools (Committee of Postgraduate Dental Deans and Directors, 2006; General Dental Council, 2008a).

Although reporting of suspected cases of child abuse/ neglect is not mandatory in the UK as it is in the USA, the responsibilities of UK dental teams are clearly outlined in the General Dental Council's standards guidance:

“As a dental professional, you have a responsibility to raise concerns about the possible abuse or neglect of children or vulnerable adults. It is your responsibility to know who to contact for further advice and how to refer to an appropriate authority (such as your local health trust or board).” (General Dental Council, 2008b)

The BSPD's policy document on dental neglect in children further emphasised the role of the dental team in child protection. The BSPD recommend that:

“Dental Services should address the needs of vulnerable children and have systems in place to safeguard children” (Harris et al., 2009a).

### ***2.2.7 Dental caries in vulnerable children***

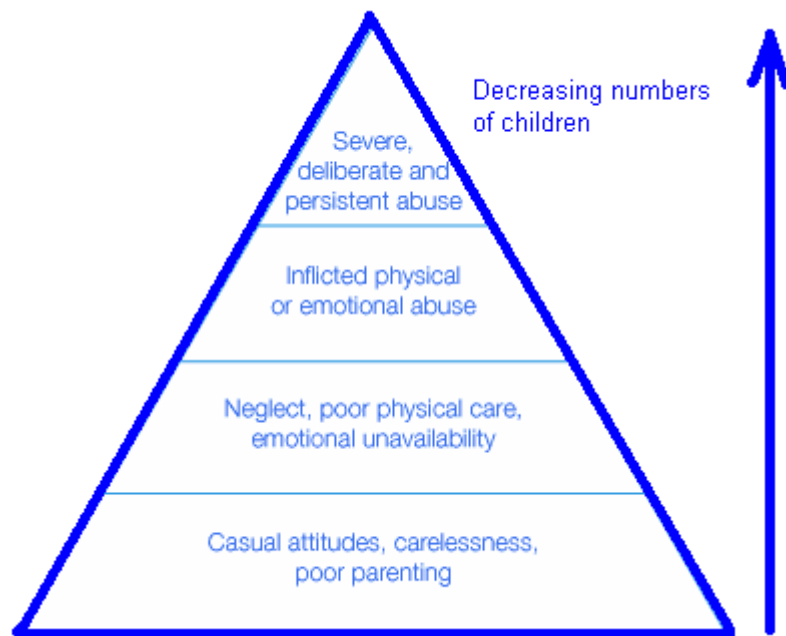
It is known that dental caries in children is a global problem and that the World Health Organisation has identified dental caries as one of their areas of concern. It has been shown that those children who are more deprived have higher caries rates than children from more affluent areas; however the relationship between oral health and child maltreatment was not investigated until 1986 (Badger, 1986). Badger studied 2 groups of children in 1984 who were family members of active duty military personnel. The children had been identified as active cases of child abuse/ neglect by the military therapy groups. The 2 groups were from

different geographic areas and Badger compared their caries experience to the 1965 Division of Health Examinations Statistics for 6-11 year olds and 12-17 year olds. He found no statistically significant difference between his study children and the national statistics (Badger, 1986). Following this Greene et al published a paper in 1994 which looked to determine whether oral health status and dental treatment needs differed between abused/ neglected and non-abused/ non-neglected children. Their abused/ neglected cases were confirmed cases of child abuse/ neglect obtained from the social services registry at a major American military medical centre. The paper concluded that abused/ neglected children are 8 times more likely to have untreated decayed teeth than non-abused/ non-neglected children (Greene et al., 1994). In 2003 Olivan wrote a short report looking at surveys of untreated decayed teeth in children who were admitted to protective and foster care systems in Zaragoza City, Spain. Results show that the untreated decay rate was higher than that of “normal” 6-12 year olds in Spain (Olivan, 2003). A study in Canada by Valencia-Rojas again looked at caries but this time in neglected as well as physically or sexually abused pre-school children who were admitted to the Children’s Aid Society of Toronto. Again they demonstrated that the level of decayed teeth in their study group was higher than that of the general population of Toronto (Valencia-Rojas et al., 2008). Recently Montechhi et al (2009) published a paper on the dental health of children who were either victims of or witnesses to violence who had been referred to the neuropsychiatric Unit of the Paediatric Hospital Bambino Gesù in Rome with psychological discomfort. To attempt to control for the psychological discomfort they had two control groups; one group of children referred to the same hospital with eating disorders and another group of children without any apparent psychological discomfort who were contacted at school. They demonstrated that the “abused” group had significantly higher dental plaque index, gingival inflammation and untreated decay than the other groups.

Although these papers have highlighted an increased likelihood that children who are abused/ neglected have a higher incidence of dental caries, none of them have been carried out in Scotland or the United Kingdom. Additionally all of the previously reported research has been on children who are already confirmed cases of abuse/ neglect. These children are likely to be only the tip of the pyramid as there are far greater numbers of children for whom some services



such as health, education, social work or the police may have welfare concerns, but who are not and may never become confirmed cases of abuse or neglect. This is illustrated in figure 2.5 which shows a pyramid of severity of child abuse and neglect.



**Figure 2:5 A pyramid of severity of child abuse with decreasing numbers of children as you get closer to the top of the pyramid**

### ***2.2.8 Comprehensive Medical Assessments***

As mentioned previously, research has shown children who experience abuse or neglect are also at increased risk of oral disease. By the late 1990s it was well recognised that comprehensive medical assessments (CMAs) were necessary to identify health needs and to co-ordinate access to health services for vulnerable and ‘at risk’ children. This was summarised in “Protecting Children A Shared Responsibility. Guideline for health professionals in Scotland” (Scottish Office, 1998) which set out the purpose of CMAs. In addition Her Majesty’s Inspectorate of Education (HMIe) Child Protection Inspections found that the health and welfare needs of children could be overlooked when children are seen by doctors who do not have appropriate training or experience. They felt there was a need to ensure the full involvement of health practitioners, particularly medical staff, in child protection processes (HM Inspectorate of Education, 2009).

## **Chapter 3    Aims of the study**

### **3.1 Scottish General Dental Practitioners questionnaire**

To determine:

The proportion of general dental practitioners in Scotland who have suspected child abuse or neglect in their paediatric patients.

The proportion of general dental practitioners in Scotland who have referred suspected cases of child abuse and to whom the cases were referred.

What factors influence the Scottish general dental practitioners' decision to refer, or not refer suspected cases.

What proportion of Scottish GDPs have read the guidance "Child Protection and the Dental Team" (Harris et al., 2006)

What proportion of Scottish GDPs received undergraduate or postgraduate training in child protection.

The willingness of Scottish GDPs to become involved in detecting neglect in their paediatric patients.

What proportion of Scottish GDPs sit on child protection committees.

If Scottish GDPs would be concerned about a child in various suggested scenarios.

Whether having had child protection training or reading "Child Protection and the Dental Team" (Harris et al., 2006) has any relationship to the likelihood of GDPs suspecting and referring cases of child abuse or neglect.

### **3.2 Comprehensive Oral Examinations for children with welfare concerns**

To introduce and establish comprehensive oral assessment clinics as an integral part of comprehensive medical assessments for Children with a welfare concern in Greater Glasgow and Clyde.

To develop an assessment protocol and standardised paperwork for comprehensive oral assessments enhancing information sharing and patient access to appropriate care.

To develop a “dental appendix” to the established comprehensive medical assessment report

To describe the demographics and oral health status of the children for whom a comprehensive oral assessment is completed.

To develop a dental care pathway for children with a welfare concern in Greater Glasgow and Clyde

## **Chapter 4     Materials and methods**

### **4.1   Scottish General Dental Practitioners study**

#### ***4.1.1   Aims***

The aim of this investigation was to assess the current knowledge and behaviours of dentists in Scotland with regard to child abuse and neglect and to ascertain whether the increased training courses available have had any impact on this. In particular this study looked at whether GDPs in Scotland suspected and referred more cases of child abuse/ neglect than reported in previous work and if the same barriers to referral still existed as previously identified. This study also set out to establish whether the uptake of child protection training had increased among GDPs and what their perceptions of the issues around dental neglect are. Finally this investigation aimed to assess how willing GDPs are to get involved in detecting neglect.

#### ***4.1.2   Method***

A cross-sectional observational study design was used to assess the views of general dental practitioners in Scotland. The study was observational as there was no way to determine which subjects would have been exposed to cases of child abuse or neglect.

As the intention of this study was to compare this research to that previously published by Cairns et al in 2005, it was felt that it would be beneficial to use the same survey method so the responses could be compared.

#### ***4.1.3   Development of the questionnaire***

Permission was gained from Cairns et al to use their 2005 questionnaire (Appendix 1). Their original questionnaire was modified as it did not have any mention of child neglect and instead was more focused on child physical abuse. The modified questionnaire was piloted with 2 different groups, one consisting of 30 dental vocational trainees (VTs) who had recently qualified and were working in general dental practice, and the other group consisting of 6 general

dental practitioners who were visiting clinicians to Glasgow Dental Hospital and School. The pilot group read the cover letter and filled in the questionnaire and answered questions regarding the format, presentation, ease of understanding of questions, and ease of completion of questions. Small alterations to the questionnaire were suggested and a final questionnaire (Appendix 2) consisting of 34 items was sent out to 50% of the GDP's in Scotland (n=1215) in March 2010. The names and addresses of these dentists were supplied to us by our colleagues in the Dental Public Health department. The sample was chosen by listing the GDPs in each Health Board alphabetically and picking every second GDP as part of the sample group. The 34 items consisted mainly of yes/ no questions. A few of the items were multiple choice and there were spaces included for respondents to add comments. The questionnaire was printed on two sheets of A4 paper. A covering letter (Appendix 3) and a prepaid envelope were enclosed to facilitate return of the questionnaires and a repeat questionnaire was sent to non-respondents in July 2010.

#### ***4.1.4 Data collection***

Data was collected from all the returned questionnaires and entered manually onto a database in SPSS version 17 which was saved on a secure encrypted USB stick. All respondents were assigned a unique study number to ensure anonymity. Although not all questions were answered by every respondent all data received was entered.

## **4.2 Comprehensive Oral Examinations for children with welfare concerns**

### ***4.2.1 Set up of clinics***

#### **4.2.1.1 Background**

After many years of work the child protection unit based at the Royal Hospital for Sick Children in Glasgow (commonly called Yorkhill) set up CMAs for children with welfare concerns. These clinics started in 2009 and involve a detailed history and account of circumstances leading to referral plus a full medical examination. They are normally requested by social workers but may also be

requested by others who contact the child protection advisors based at Yorkhill. The most common reason children are referred for one of these assessments is due to concerns regarding physical neglect. The purpose of the examinations is to assess the health of the child and any medical, physical or emotional needs that they may have that are not currently being met by their carer.

Requests for CMAs were made to the Child Protection Advisors based at the Child protection Unit, Yorkhill in the first instance. They hold the calendar for the CMA clinic slots for the medical component. They aim to appoint every child to a CMA appointment within a 2 week time frame. The advisor then copied the author into the early sharing for the children who will be subject to the CMA so that dental input could be arranged.

At the beginning of the first pilot clinics the only assessment of the mouth was a comment from a paediatrician on the teeth and a grading of tooth decay as mild, moderate or severe. This grading was clearly not appropriate as dental texts do not grade dental caries in this way and this demonstrated a lack of involvement and inclusion of the dental profession in these clinics. HMle inspectors had noted that the health and welfare needs of children could be overlooked when children are seen by doctors who do not have appropriate training or experience, the same could also be said of oral health needs if those assessing do not have appropriate training or experience. The child protection unit was agreed that comprehensive medical assessments would not be comprehensive unless the oral examination was performed by someone highly skilled in the assessment of the oral cavity, namely a dentist.

The aims of this part of the research were: to establish regular input from paediatric dentistry to the CMAs and to quantify the relationship between oral health and child maltreatment in Greater Glasgow and Clyde .

Ethical approval was gained from the West of Scotland Research Ethics Committee (Appendix 4) and dental input began during the Pilot CMA's in the Child Development Centre of Bridgeton Health Centre. This allowed us to identify the necessary dental facilities, establish comprehensive oral assessments as integral part of comprehensive medical assessments, develop the

necessary paperwork, and set up pathways for future dental care for the children involved.

At the clinics the parent or carer with parental responsibility for the child, and the social worker who made the referral, attended with the child. This allowed the social worker who made the referral to get immediate verbal feedback. As well as a full verbal opinion, provided to the parent/ carer and social worker, a standard clinical data collection sheet and report of the examination was also completed.

#### **4.2.1.2 Development of assessment paperwork and protocol**

The paperwork was based on the previously established comprehensive medical assessment form for children with a welfare concern (Appendix 5). From this document a comprehensive four page form for a comprehensive oral assessment (COA) was developed and piloted at the pilot medical clinics. Input from medical colleagues involved in the pilot allowed the form to be simplified to its current format (Appendix 6). The form records:

- Details of registration with dental services
- The referrers main concern
- Demographic details of the child being examined
- Dental concerns raised
- Birth and neonatal details
- Family dental history (child and accompanying parent)
- Significant health problems of the child

A basic clinical oral examination was then performed and recorded including:

- Extra-oral examination including the temporomandibular joint, any lymphadenopathy and any asymmetry

- Intra-oral examination including assessment of the soft tissues, oral hygiene, a basic periodontal examination (BPE), and then assessment of the teeth present including any caries, restorations, tooth wear, hypomineralisation, and any other abnormal features including evidence of trauma.

The clinical examination consisted of a visual inspection for all children in accord with British Association for the Study of Community Dentistry's criteria (Pitts et al., 1997) and a basic periodontal examination for all of the children aged 7 years and older (Clerehugh and Kindelan, 2012). The examining dentist then summarises their findings and writes their opinion plus any action required.

#### **4.2.1.3 Development of “Dental appendix to Comprehensive medical assessment report”**

Following the clinical examination a dental appendix report of the examination is completed (Appendix 7) and added to the paediatrician's medical report. The appendix also includes details of dental targets that are agreed with the accompanying adult. This section was added at the request of the lead paediatrician for child protection in Greater Glasgow. A copy of the report goes to the social work department and it had to include simple targets in non-technical language that the parents/carers and social workers would understand. The targets include:

- Teeth have to be brushed twice per day with fluoride toothpaste
- The child has to be taken regularly to the dentist (this means every 3-6 months) for check ups as well as any treatment required
- Advice from dental staff regarding diet and oral hygiene will be listened to and taken on board

The clinic location for future dental appointments is then agreed. These appointments will include treatment of active caries and a comprehensive preventive treatment plan.



This section ends with a very clear message for the adult carer: “Failure to comply with these measures will result in this child experiencing considerable pain and suffering”.

#### **4.2.1.4 Development of audit recording sheet**

The audit recording sheet was developed from the standard sheet used in CLEFTSiS (the national Managed Clinical network for Cleft Service in Scotland) core audits in paediatric dentistry. The child’s age, dmft/ dmfs scores, postcode, details of registration with dental services, tooth wear scores, plaque indices, BPE scores and soft tissue abnormalities were entered onto a standard data recording sheet in the clinic. The plaque indices (Silness and Loe, 1964) were recorded for each sextant of the child’s mouth and a mean score for each child was calculated by totalling the sextant scores and dividing by 6. A score of 0 indicated excellent oral hygiene, 0.1-0.9 was good oral hygiene, 1.0-1.9 indicated that the oral hygiene required improvement and scores greater than 2 indicated poor oral hygiene. BPE scores were only recorded for children aged 7 years and older and again a mean score for each child was calculated by totalling the scores from each sextant and dividing by 6. A score of 0 indicated healthy gingivae. The data was later transcribed to a password protected secure Excel database and then analysed using SPSS version 17.

#### **4.2.1.5 Training and calibration**

Following the pilot clinics in Bridgeton Health Centre the CMAs were audited by the Child Protection Unit at The Royal Hospital for Sick Children and the current model for CMAs in Greater Glasgow and Clyde was developed which included dental input. CMA clinics were set up in Drumchapel, the Glenfarg centre in Possilpark, and the Southbank centre in Gorbals as well as the already established clinic in the child development centre of Bridgeton Health Centre.

As the CMAs were established across Greater Glasgow more dental staff were required. In order to ensure all children received the same standard of dental assessment a training package was developed and a training afternoon organised. The training package (Appendix 8) was developed using clinical photos as simulated patient scenarios. We used these clinical photographs to

achieve standardisation of recording of clinical dental data. The training afternoon also included time to practise entering data in the audit sheet. Following this all of the attending dentists were able to discuss their results for each simulated scenario, paying particular attention to any discrepancies between dentists. In this way the method of recording the clinical information was standardised.

#### **4.2.1.6 Development of roles and responsibilities of dental co-ordinator**

The development of a “roles and responsibilities” document (Appendix 9) for the co-ordinator of the dental input was necessary to ensure that in future whoever assumes this role will be able to maintain the dental input.

#### **4.2.1.7 Assessing outcomes**

An audit of the actions resulting from a CMA is currently ongoing in association with colleagues in public health. This will assess the impact of the dental assessments on the wellbeing of the child as well as outcomes for both the children and families concerned. This audit encompasses both qualitative and quantitative methods and is being conducted over a period of 2 years. In the meantime we are able to follow up a small group of the children who received a dental assessment as part of their comprehensive medical assessment. This group of children consisted of those who received their comprehensive medical assessment at Bridgeton Health Centre and elected to be registered with the community dental service. The children’s electronic dental record was accessed and it was recorded as to whether the children had attended dental services as agreed at their comprehensive oral assessment. Any failures to engage with dental services resulted in the child’s social worker being informed. The social worker could then advise if they were aware of any circumstances which could have led to failure to attend scheduled dental appointments or if the child had subsequently been accommodated out with the area.

## Chapter 5 Results

### 5.1 Scottish General Dental Practitioners study

#### 5.1.1 Pilot questionnaire

In total 36 pilot questionnaires were returned. This consisted of 30 completed by the dental vocational trainees (VTs) and 6 by the visiting GDPs to Glasgow Dental Hospital. All of these 36 pilot questionnaires were returned with a cover sheet requesting a response with suggestions about the style and presentation of the questionnaire. Only a few suggestions were made for change including changing the wording of a couple of questions and changing the scale for assessing the GDP's willingness to get involved in detecting neglect. The majority of respondents were happy with the questionnaire and did not suggest any changes.

##### 5.1.1.1 Results from VT groups

Results from the VT pilot group are presented separately from the visiting GDP group as there were only 6 GDPs. The results from the VT group are presented in the following section as they make interesting reading and the opinions about child protection from a group of dentists at this early stage of their careers has never been discussed before. Fifty-three percent of the VTs were male. As they were only from the West of Scotland VT study group they were working in a limited number of Scottish Health Boards and the Board representation can be seen in table 5.1 below.

**Table 5:1 Spread of VTs in pilot study by health board**

Health Boards represented in sample of VTs		
Health Board	No. of VTs	Percent
Ayrshire and Arran	8	26.7
Dumfries & Galloway	1	3.3
Forth Valley	2	6.7
Greater Glasgow & Clyde	7	23.3
Highland	3	10.0
Lanarkshire	9	30.0
Total	30	100.0

Only one (3%) of the VTs from this sample had not received formal undergraduate training in child protection but 76% said that they had not seen the document “Child Protection and the Dental Team”. Again, only one VT (3%) said they had received a copy of their local area child protection guidelines when they started working in their dental practices. Some 10% (n=3) had suspected child abuse/ neglect in one of their patients but none of the VTs had referred a case. However when asked directly if they have ever suspected but not referred a case only 7% (n=2) admitted to this. The vast majority (70%) would refer to/ discuss with a child protection adviser if they did have a case of suspected child abuse/ neglect with a minority choosing to refer to/ discuss with a social worker or paediatric colleague (10% and 17% respectively). Unfortunately only one VT (3%) knew who their child protection adviser was. All but one of the VTs (97%) wished to discuss suspected cases with a colleague before referral and 47% wished to discuss the case with someone else (usually their VT trainer or a paediatric consultant, although they did not stipulate whether they meant a consultant in paediatric dentistry or a medical paediatric consultant). Some 73% believed that cases of neglect had a higher incidence of untreated dental decay.

The reasons that would affect the VTs decisions to refer are set out in table 5.2. The most common reason affecting the VTs decision to refer was “lack of certainty about the diagnosis”

**Table 5:2 Reasons affecting VTs decisions to refer**

Reason affecting decision to refer	No. of VTs	Percent
Concerns about impact on the practice (financial, time taken, loss of income, income withdrawal)	2	6.7
Fear of family violence to the child	23	76.7
Fear of family violence to you	9	30
Fear of litigation	10	33.3
Fear of consequences to the child from the intervention of statutory agencies	14	46.7
Lack of knowledge of referral procedures	18	60
Lack of certainty about the diagnosis	29	96.7

When asked “If you have pointed out a child’s dental problems and offered appropriate and acceptable treatment did any of the following make you concerned about a child?”: the majority (80%) of VTs would be concerned by the child returning in pain at repeated intervals, 70% by the child requiring repeated

GAs for extractions, 63% by the irregular attendance of the child and 57% by the child failing to complete treatment.

Most of the VTs in this sample (87%) felt that dentists or members of the dental team are well placed to recognise behaviour/signs that may be attributable to child abuse/neglect. However only 4 (13%) felt that dental professionals were adequately informed about issues of child abuse/protection. Some 77% wanted further training on how to identify child neglect and 90% wanted further training on the mechanisms for reporting suspicions of possible neglect. Some 87% believed that child protection training should be part of vocational training.

### **5.1.2 *Final questionnaire results***

#### **5.1.2.1 Demographics**

A response rate of 52% was achieved; this represented the views of 628 Scottish GDPs. Not all questionnaires were fully completed but analysis was performed on all available data. Fifty three percent of respondents were male. The majority of respondents were in practices based in Greater Glasgow and Clyde (25%), with others in Lothian (15%), Lanarkshire (10%), Tayside (9%) and Grampian (8%) Health Boards. The remaining respondents were spread throughout the remaining nine Health Boards in Scotland (Table 5.3).

The vast majority of respondents worked in independent NHS practices (84%) (Table 5.4) and 49% of respondents were 20 years or more post qualification (Table 5.5).

**Table 5:3 Spread of respondents by health board**

Health Board	Percent of total no. GPs in Scotland working in Health Board		
	No. of respondents	Percent	
Ayrshire and Arran	49	7.8	6.9
Borders	13	2.1	1.7
Dumfries & Galloway	11	1.8	2.1
Fife	46	7.3	6.4
Forth Valley	35	5.6	5.7
Grampian	52	8.3	8.9
Greater Glasgow & Clyde	156	24.8	26.4
Highland	40	6.4	5.0
Lanarkshire	62	9.9	10.4
Lothian	94	15.0	17.1
Orkney	2	0.3	0.2
Shetland	7	1.1	0.2
Tayside	53	8.4	8.8
Western Isles	3	0.5	0.2
Missing	5	0.8	0
Total	628	100	100

**Table 5:4 Respondents working arrangements**

Working arrangement	No. of respondents	Percent
Independent NHS GDP	527	83.9
Salaried NHS GDP	92	14.6
Missing	9	1.4
Total	628	100.0

**Table 5:5 Number of years since BDS qualification**

Years since BDS Qualification	No. of respondents	Percent
<2 years	7	1.1
2-<5 years	65	10.4
5 - < 10 years	84	13.4
10 - < 20 years	156	24.8
20 years or more	310	49.4
Missing	6	1.0
Total	628	100.0

### 5.1.2.2 Training and access to child protection guidelines

Of the 619 respondents who answered the question regarding undergraduate child protection training, 30% had received formal undergraduate training in child protection. Respondents were less likely to have received undergraduate child protection training with increasing years since qualification (see Table 5.6). This finding is statistically significant ( $p < 0.001$ ) and also shows a linear by linear association. 55% ( $n=344$ ) of respondents had received some postgraduate training in child protection, most commonly a “one-off” lecture (308 of 344).

**Table 5:6 Years since BDS qualification and formal UG training in child protection**

Years since BDS Qualification		Formal UG training in Child Protection		
		no	yes	Total
<2 years	Count	1	6	7
	% within Years since BDS Qualification	14.3%	85.7%	100.0%
2-<5 years	Count	12	53	65
	% within Years since BDS Qualification	18.5%	81.5%	100.0%
5 - < 10 years	Count	31	53	84
	% within Years since BDS Qualification	36.9%	63.1%	100.0%
10 - < 20 years	Count	118	36	154
	% within Years since BDS Qualification	76.6%	23.4%	100.0%
20 years or more	Count	271	38	309
	% within Years since BDS Qualification	87.7%	12.3%	100.0%
Total	Count	433	186	619
	% within Years since BDS Qualification	70.0%	30.0%	100%

Only 22% ( $n=141$ ) of GDPs who returned the questionnaire had been sent a copy of their local area child protection guidelines when they first started work at their practice, however 55% ( $n=347$ ) responded positively when asked if they had read the 2006 manual “Child Protection and the Dental Team”. A total of 15% ( $n=93$ , 6 did not answer) of GDPs who responded to this questionnaire had never had any form of child protection training and also had never seen “Child Protection and the Dental Team”.

### 5.1.2.3 Suspicion and referral

Thirty-seven percent (n=235) of respondents had suspected child abuse/ neglect in one or more of their paediatric patients but only 11% (n=72) had referred a case. Of those who had suspected child abuse/ neglect some 94% (n=220) had either had some form of child protection training or had seen “Child Protection and the Dental Team”. This finding is highly statistically significant ( $p<0.001$ ). When looking at the 72 GDPs who had referred, 96% (n=69) of those respondents had either had some form of child protection training or had seen “Child Protection and the Dental Team”. Six percent (n=37) of respondents had seen a definite case of child abuse/ neglect in the last six months. The questionnaire also directly asked whether the GDPs had ever suspected that a child was being abused or neglected but not referred the case. Seventeen percent (n=107) admitted to this with 81% (n=87) of these GDP’s having recorded their observations in the patient’s case notes.

Of all the GDPs who returned the questionnaire 77% (n=485) thought that children who were abused/ neglected had more dental decay.

### 5.1.2.4 Factors influencing practice

The GDP’s were asked about various factors that may affect their decision to make a referral in a suspected case of child abuse/ neglect (Table 5.7). The most common factor that affected their decision was “lack of certainty of the diagnosis” with 74% saying this would affect their decision. The least likely factor to affect their decision was “concerns about impact on the practice” with only 6% citing this as a factor influencing their decision to refer.

**Table 5:7 Factors influencing GDPs decision to refer**

Factor influencing decision	% influenced	Number of missing answers
Concerns of impact on practice	6% (n=38)	69
Fear of violence to child	52% (n=324)	66
Fear of violence to GDP	31% (n=195)	68
Fear of litigation	35% (n=220)	57
Fear of consequences to child from statutory agencies	46% (n=286)	60
Lack of knowledge of referral procedures	43% (n=271)	57
Lack of certainty of diagnosis	74% (n=465)	39



The GDPs were then asked, “If you have pointed out a child’s dental problems and offered appropriate and acceptable treatment did any of the following make you concerned about a child?” The percentages of GDPs citing each of the following factors- irregular attendance, failure to complete treatment, returning in pain at repeated intervals, and requiring repeat GA for extractions- as being of concern is shown in Table 5.8.

**Table 5:8 Percent of GDPs concerned by options**

Option	% concerned
Irregular attendance	47% (n=296)
Failure to complete treatment	43% (n=270)
Returning in pain at repeated intervals	45% (n= 285)
Requiring repeat GA for extractions	37% (n=233)

When these results were cross tabulated with whether a GDP had received any child protection training or had read the “Child Protection and the Dental Team” manual there was a significant difference between those who had training or had seen the manual compared to those who had not. For each of the four options (irregular attendance, failure to complete treatment, returning in pain at repeated intervals and requiring repeat GA for extractions) the proportion of GDPs who were concerned about the options was higher for those who had training or had read the manual (Table 5.9).

**Table 5:9 Percent of GDPs concerned by option compared with whether they had any child protection training or had seen CPDT manual**

Option	% GDPs concerned	
	With any training or seen manual n=468	No training and never seen manual n=73
Irregular attendance	57% (n=268)	38% (n=28)
Failure to complete treatment	53% (n=246)	32% (n= 24)
Returning in pain at repeated intervals	55% (n=257)	38% (n=28)
Requiring repeat GA for extractions	47% (n=208)	34% (n=25)

### 5.1.2.5 Child Protection procedures

Five hundred and ninety three GDPs chose to answer the question regarding who they would refer a suspected case of child abuse/ neglect to (missing data for 35 GDPs). The majority of respondents (60%, n=358) would refer a suspected case of child abuse/ neglect to their child protection advisor. A social worker was the next most common choice for referral (15%, n=86) followed by a paediatric dental colleague (14%, n=82) and then the Police (3%, n=19). Less than 1% (n=2) of respondents would refer a suspected case to a charity organisation but 8% (n=46) would refer a suspected case to another agency entirely, most commonly the child's general medical practitioner (GMP).

Only 31% of all respondents (n=193) knew who their child protection advisor was. It was found that for those GDPs with no training and who hadn't read the "Child protection and the Dental Team" manual only 2.4% knew who their child protection advisor was compared to 38% of those who had either had training or had read the manual ( $p<0.001$ ).

Twenty-one percent (n=129) of the responding GDPs were aware that inter-agency training courses were available in their area. The vast majority, 84% (n=526), said they would prefer to discuss their suspicions with a dental colleague before referring a suspicious case and 32% (n=203) would choose to consult someone else before referring. This was most commonly the child's GMP.

Most respondents (63%, n=398) felt that GDPs or other members of the dental team were well placed to recognise signs of abuse/neglect, however only 19% thought GDPs were adequately informed about issues of child abuse/ protection. This was reflected by 73% (n=458) saying that they would like further training to identify child neglect and 78% (n=489) wanting further training on the mechanisms of reporting suspected cases of neglect. Eighty eight percent of respondents thought that child protection should be part of dental vocational training.

The GDPs were asked to indicate whether they agreed with the following statement- "I am willing to get involved in detecting neglect". The breadth of answers is shown in Table 5.10.

**Table 5:10 Willingness of GDPs to become involved in detecting neglect**

I am willing to get involved in detecting neglect	% of GDPs
Strongly agree	21% (n=132)
Agree	52% (n=324)
Neither agree or disagree	19% (n=120)
Disagree	3% (n=19)
Strongly disagree	2% (n=11)
Missing answer	3% (n=22)

Out of all the responding GDPs only 1% (n=4) sat on a multi-agency child protection committee and those that did were often involved through their church rather than as a dentist.

## **5.2 Comprehensive Oral Examinations for children with welfare concerns**

### ***5.2.1 Set up of clinics***

The pilot clinics took place at Bridgeton Health Centre. The main comprehensive medical assessment took place in the Child Development Centre, with the COAs taking place on the same day in the Community Dental Department at Bridgeton. The pilot clinics were completed at the end of 2009. At this point the clinics were expanded to cover the whole of NHS Greater Glasgow and Clyde. Four sites were chosen: Bridgeton Health Centre for the children in the East of NHSGGC, Possilpark Health Centre in the North, Drumchapel Health Centre in the West and the Southbank Centre in the South. In addition the Fred Stone Unit in the Royal Hospital for Sick Children, Yorkhill could be used for large sibling groups (3 or more).

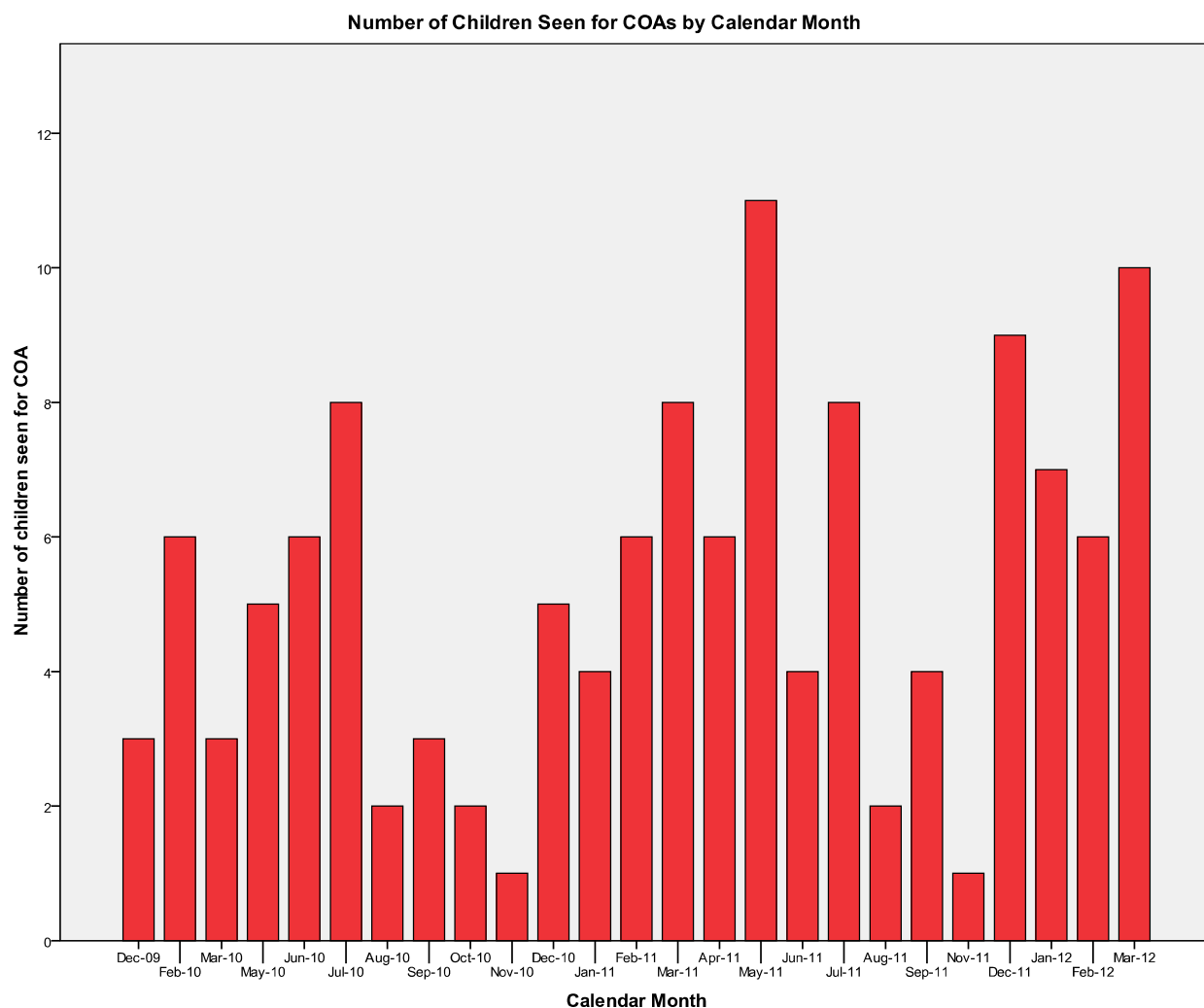
Each of these sites is staffed by a different community paediatrician and support staff for the medical part of the CMAs. As the author could not be at every site there were three dentists along with the author who undertook the COAs.

### **5.2.2 Demographics**

Data was collected for 130 children seen for a COA from December 2009 until March 2012. The Child Protection Unit at Yorkhill provided us with their data:

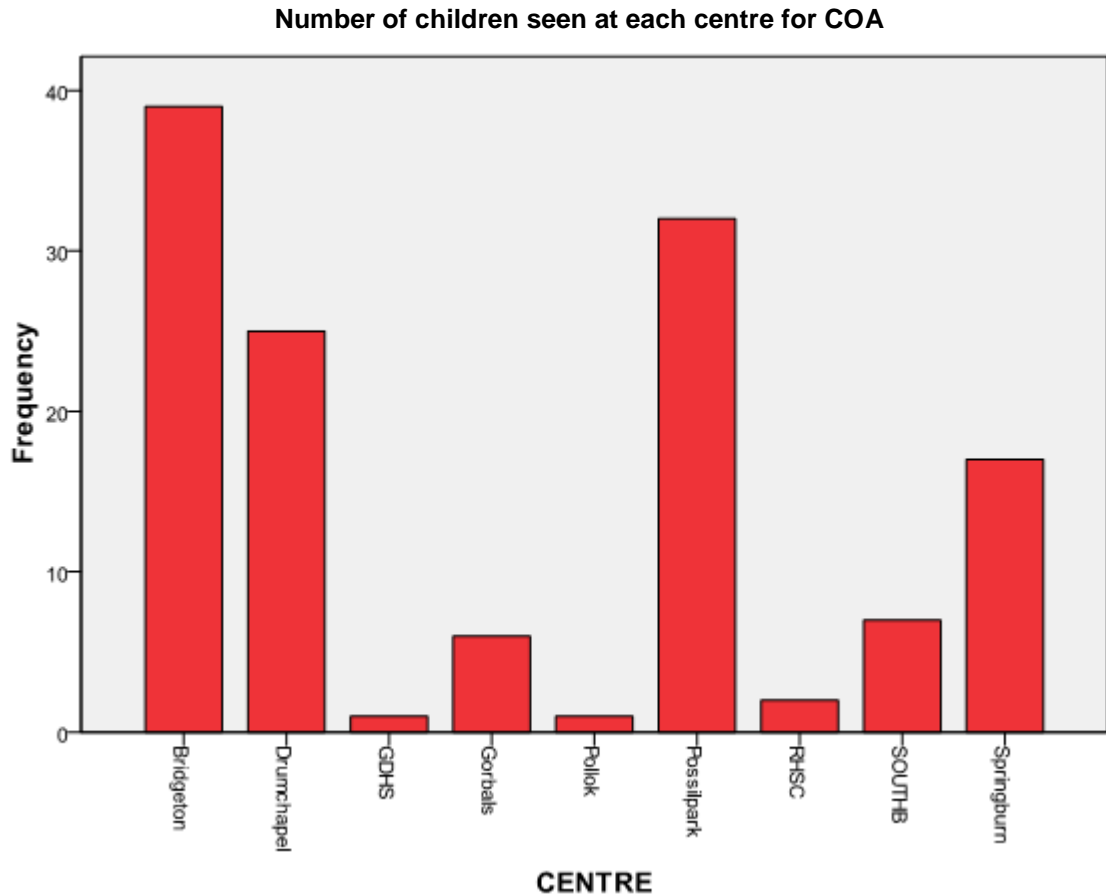
- From Sept 11 to March 12 there were 48 CMAs across the GGC sites. Dental data was available for 39 of these children (9 missing dental data, 19%)
- In 2010 there were CMAs for 74 children in NHS GGC. Dental data was available for 39 of these CMA patients (35 missing dental data, 48%)
- In 2011 there were 88 children seen for CMAs in NHS GGC. Dental data was available for 68 CMA patients (20 missing dental data, 23%)

The missing dental data was due to the dentists forgetting to send the data to the author in most cases. In a few cases the child did not receive dental input to their COA either because there was no available dentist or the child / family refused dental examination. The number of children seen for a COA varied by month (Figure 5.1). The busiest months for COAs so far have been May 2011 (11 children seen for COAs) and March 2012 (10 children seen for COAs). The COAs have been running for 28 calendar months (Dec 2009- March 2012) and since the CMAs began there have only been 3 calendar months (January 2010, April 2010 and October 2011) when a CMA has not been completed. The number of children seen each month ranges from 1 to 11 children with a mean number of 4 to 5 children seen every month over the 28 months the COAs have been running.



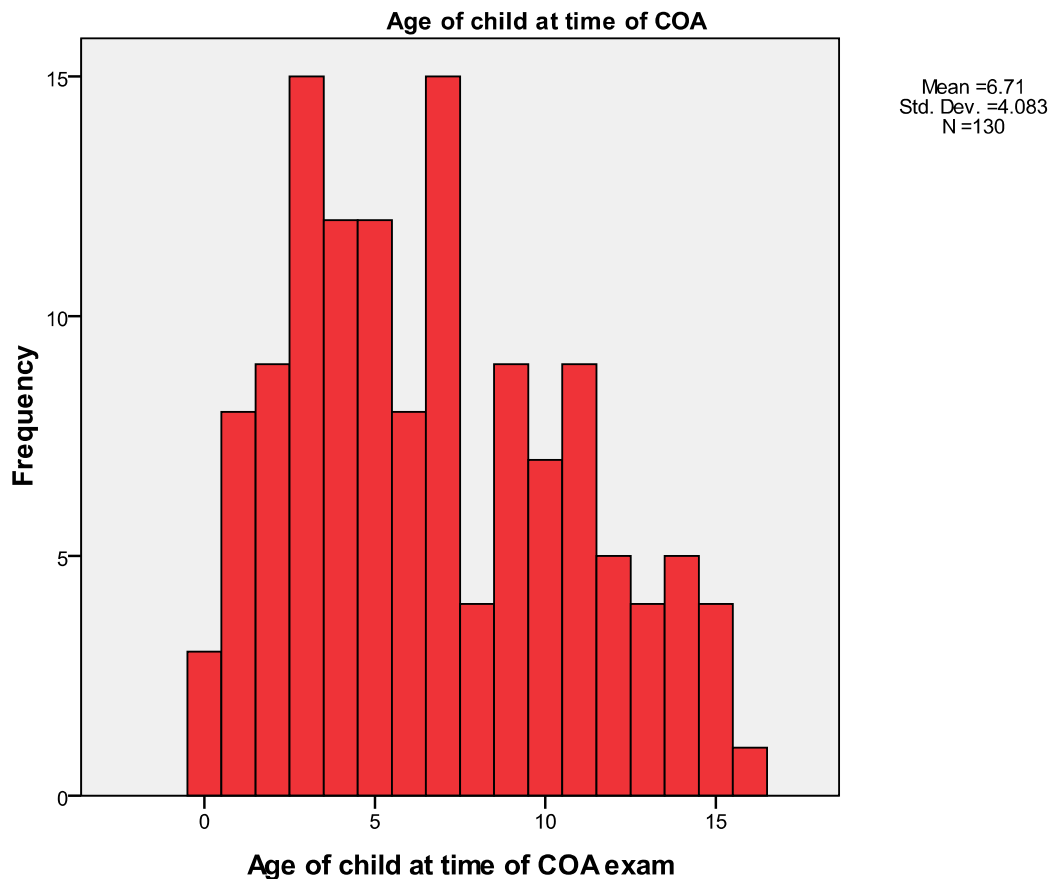
**Figure 5:1 Graph of number of children who receive COAs every month**

The children seen were spread across the various sites in Glasgow. As the site at Southbank Centre did not have any dental facilities the children from this area were seen when possible in Gorbals Health Centre which was a 5 minute walk from the Southbank Centre. Some children were also seen at Springburn Health Centre when they could not be seen at Possilpark Health Centre. The number of children who have attended each clinic so far is illustrated in Figure 5.2. Forty-nine children have been seen in the north of the City (Possilpark and Springburn combined) which equates to 38% of the total number of children seen for a CMA. The next busiest centre was Bridgeton in the east of the City who examined 39 CMA children (30%). Drumchapel in the west has seen 25 children (19%) and in the south of the city (Southbank, Gorbals and Pollok combined) 14 children (11%) have been examined. The remaining 3 children (2%) were seen at Glasgow Dental Hospital and School (GDHS) or the Royal Hospital for Sick Children (RHSC).



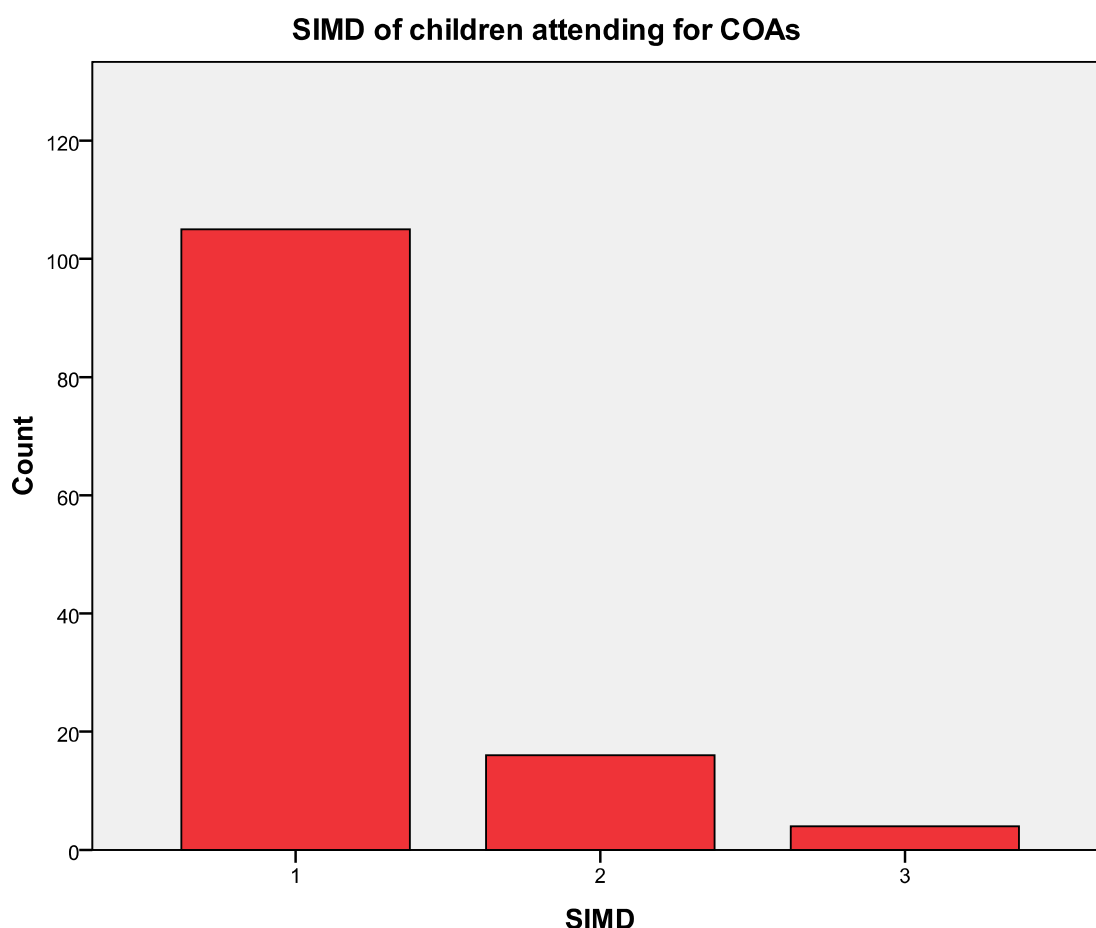
**Figure 5:2 Graph of number of children seen at each centre**

The children seen for COAs ranged from 4 months to 16 years old with a median of 6 years old. The spread of ages is shown in Figure 5.3 which demonstrates the number of children in each age bracket. The most common ages for children to receive a COA as part of their CMA was 3 years old ( $n=15$ , 11.5%) and 7 years old ( $n=15$ , 11.5%). Thirty six percent of the children seen for a COA were preschool children (aged less than 5 years), 49% were of primary school age (5-11 years old) and 15 % were of secondary school age (12 - 16 years old).



**Figure 5:3 Graph of frequency of ages of children attending for COAs**  
All ages from 4 months up to and including 16 years old are represented. The most frequent ages were 3 and 7 years old with 15 children each of these ages.

All of the children seen for COAs lived in postcode areas with a Scottish Index of Multiple Deprivation (SIMD) quintile of 3 or less. The SIMD classification identifies small area concentrations of multiple deprivation and is presented at data zone level based on postcode unit information. It has seven domains (income, employment, education, housing, health, crime and geographical access) which have been combined into an overall index to rank relative multiple deprivation in all geographical areas throughout Scotland. One of the SIMD classifications is based on quintiles of deprivation where quintile 1 is the most deprived and quintile 5 is the least deprived. The postcode data was not collected for 5 of the children (4%). Most of the children (n= 105, 81%) lived in an area with a SIMD quintile of 1 which represents the most deprived postcode areas of Greater Glasgow. A further 16 children (12%) lived in a SIMD 2 area with the remaining 4 children (3%) living in SIMD 3 areas. Figure 5.4 demonstrates the spread of SIMD indices for all the children seen for CMAs.



**Figure 5:4 Graph of SIMD indices for children attending for COAs**

Sixty-nine percent (n= 89) of the children seen for a COA were reported to be registered with dental services. This is shown in Table 5.11.

**Table 5:11 Registration with dental services for COA children**

Registration with dental services	No. of children	Percent
No	41	31.5
Yes	89	68.5
Total	130	100.0

### **5.2.3 Caries experience**

#### **5.2.3.1 Number of decayed, missing and filled teeth in children aged 9 and under**

The results for the mean number of decayed missing and filled primary teeth (dmft) are shown in Table 5.12. There were 95 children 9 years old and younger



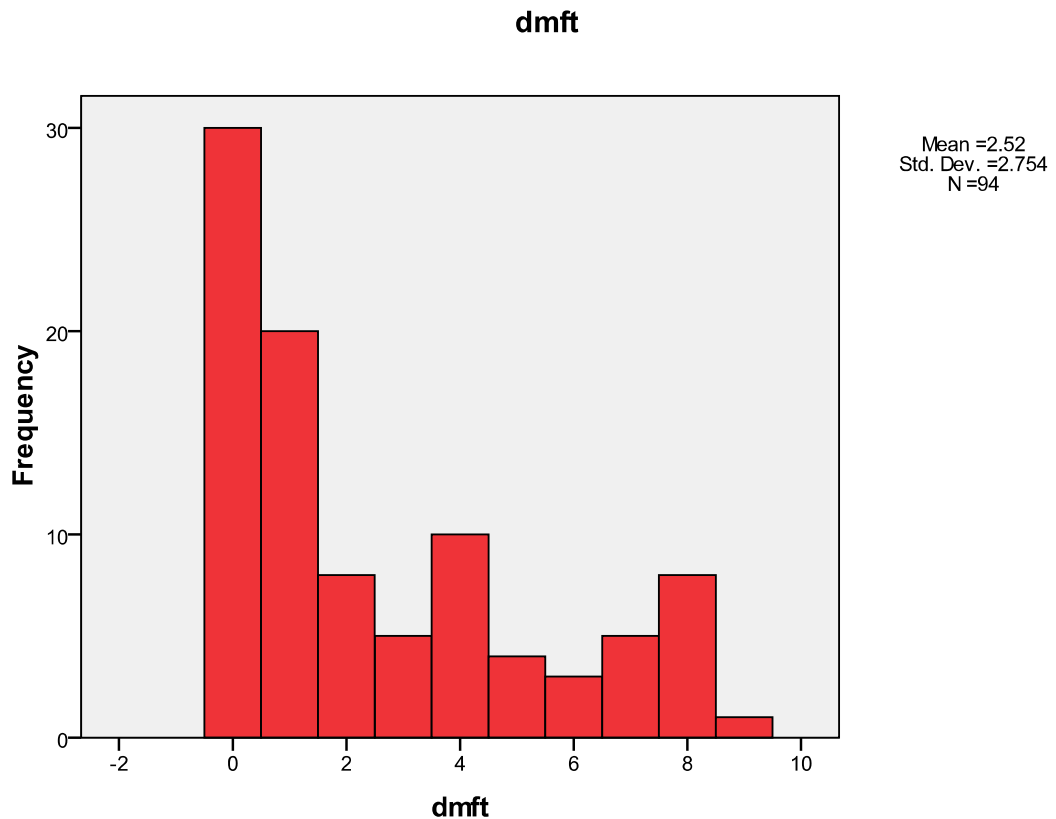
and data on dmft was collected for all but one of these children. The mean age was 4.68 years and the median age was 5 years.

**Table 5:12 Decayed, missing and filled teeth in the primary dentition  
Data from children aged 9 years and younger (n = 94)**

	Number of decayed teeth (dt)	Number of missing teeth (mt)	Number of filled teeth (ft)	Number of decayed, missing and filled teeth (dmft)	Number of decayed, missing and filled surfaces (dmfs)
Mean	1.96	.80	.07	2.52	10.98
Median	1.00	.00	.00	1.00	5.50
Std. Deviation	2.341	2.118	.553	2.754	13.688

Table 5.12 shows that the average dmft for children 9 years old and younger was 2.52. The mean number of decayed teeth (dt) was 1.96. The mean number of missing teeth (mt) was 0.8 and the mean number of filled teeth (ft) was 0.07. The mean number of decayed, missing and filled surfaces (dmfs) was 10.98.

Figure 5.5 shows that there were 30 children (32%) who had a dmft equal to 0. In other words the percentage of CMA children under 9 years old who had no obvious evidence of decay experience was 32%. For the 68% (n=64) of children with obvious decay i.e. those who had a dmft greater than 0, the mean dmft was 3.7 (range 1-9, standard deviation 2.6) and the dmfs was 16.3 surfaces (range 1-51, standard deviation 13.8). Sixty-five percent of the children in this sample had untreated and obvious current decay (% of children with dt>0).



**Figure 5:5 Graph of frequency of dmft values in children presenting for COAs**

The care index ( $ft/dmft \times 100$ ) for the primary dentition in children aged 9 years and under was 2.8%.

In the children 9 years and younger there were 75 children who lived in a Scottish Index of Multiple Deprivation (SIMD) 1 area and of these children some 32% were caries free. There were 12 children living in SIMD 2 areas and of these children some 33% were caries free. Only 4 children in this group lived in a SIMD 3 area and of these 2 children were caries free (50%) and 2 had evidence of caries.

### **5.2.3.2 Number of decayed, missing and filled teeth in children aged 10 and over**

The results for the number of decayed, missing and filled permanent teeth are shown in Table 5.13. There were 35 children aged 10 years and over and DMFT scores were collected for all of these children. The mean and median age of

these children was 12 years. The mean number of decayed permanent teeth (DT) was 3.6, the mean number of missing permanent teeth (MT) was 0.7, the mean number of filled permanent (FT) teeth was 0.9 and the mean DMFT was 5. The mean number of decayed, missing and filled surfaces (DMFS) in the permanent dentition was 12.

**Table 5:13 Number of decayed, missing and filled permanent teeth in children aged 10 years and above (n=35)**

	Number of decayed teeth (DT)	Number of missing teeth (MT)	Number of filled teeth (FT)	Number of decayed, missing and filled teeth (DMFT)	Number of decayed, missing and filled surfaces (DMFS)
Mean	3.60	.69	.91	5.03	11.86
Median	3.00	.00	.00	4.00	6.00
Std. Deviation	4.089	1.105	1.597	4.560	13.818

Only 17% of children aged 10 years and over had a DMFT equal to 0. When looking at the results for those children with a DMFT greater than 0 (n= 29) (Table 5.14) the mean DMFT was 6 (range 1-17, standard deviation 4.3) and DMFS was 14.3 (range 1 - 60, standard deviation 14).

**Table 5:14 DMFT and DMFS scores for children 10 years and older with DMFT>0**

	DMFT	DMFS
Mean	6.07	14.31
Median	4.00	10.00
Std. Deviation	4.325	13.982

The care index for the permanent dentition in children aged 10 years and older was 18% ( $0.91/5.03 \times 100$ ).

In this age group 31 children lived in SIMD 1 areas and of these 31 children 16% were caries free. The remaining 4 children lived in SIMD 2 areas and only one of these children (25%) was caries free.

### **5.2.4 Urgent care required**

Nineteen children (15%) were found to require urgent dental care. All of these children were in the 9 years and younger age group (20% of all children aged 9 years and younger).

### **5.2.5 Trauma, enamel defects and oral infection**

In total ten children (7.7%) were found to have evidence of dental trauma. In children aged 9 years and younger some 7.4% (n=7) had evidence of dental trauma. This was mainly either previously undiagnosed injuries to the primary incisors which had resulted in discolouration due to either loss of vitality or sclerosis of the pulp, and enamel dentine fractures to permanent teeth. In the children aged 10 years and older some 8.6% (n=3) had evidence of dental trauma, mainly previous enamel dentine fractures.

Seven children (5.4%) had clinical evidence of enamel defects affecting their teeth. In those aged 9 and younger three children had evidence of enamel defects (3.2%) and in those aged 10 and over four children (11.4%) had evidence of enamel defects. No children had any evidence of oral candidal infection, oral herpetic infection or any other soft tissue infections.

### **5.2.6 Plaque indices and BPE scores**

Plaque indices were recorded for each sextant of a child's mouth. These were recorded for 100 children in this study and the mean plaque index for each child was entered into the database. The overall mean of these values was 1.49 (median 1.91). Only sixteen of the children for whom a plaque index was recorded had a mean plaque index of 0.

There were 63 children aged 7 years and older who were eligible to have their basic periodontal examination (BPE) values recorded. A mean BPE value was recorded for 40 of these children (63.5%). The mean of these values was 1.09 with a median of 1. Only 5 children had a mean BPE of 0 which indicated healthy gingivae.

### **5.2.7 Tooth wear scores**

Tooth wear scores were recorded for 85 children. Fifty-six of these children had no evidence of tooth wear (66%). In nine of these children the teeth could not be assessed for evidence of tooth wear due to the presence of caries. In four of the children with evidence of wear to their anterior teeth it affected their permanent incisors, in the remaining 16 children it was the primary incisors which were affected. In the cases whose permanent incisors were affected 2 children had tooth wear confined to enamel only and 2 had tooth wear which extended into dentine. In the cases where the primary incisors were affected 5 cases were confined to enamel only, 10 extended into dentine and 1 case involved the dental pulp. Of the 85 children for whom tooth wear scores were recorded there were 63 children in the 9 years and younger age group and of these children 25% had evidence of tooth wear, 14% were excluded due to caries or unerupted teeth and 60% had no evidence of tooth wear. There were 22 children in the 10 years and older age group who had tooth wear scores recorded. Of these children 18 % had evidence of tooth wear and the remainder had no evidence of tooth wear.

### **5.2.8 Developing care pathways**

When the children receive their COA's the family are informed of any active or preventive dental treatment required and are offered the options of either attending their own GDP (if they are registered) or registering there and then with the community dental service. There was also the option of direct referral from the COA to the appropriate service if a GA was deemed necessary. Table 5.15 shows the services where families decided to have treatment for their child undertaken. The majority of families chose to either return to their own general dental practitioner (n = 54, 41.5%) or attend the community dental service (n = 49, 37.7%). One child was only suitable for treatment within the hospital dental service and 16 children required joint care between the hospital dental service and either the community dental service or their own GDP.

**Table 5:15 Providers of further dental care for COA children**

Provider of further care	Frequency	Percent
Not recorded	7	5.4
CDS	49	37.7
CDS/GDS	3	2.3
GDS	54	41.5
HDS	1	0.8
HDS/CDS	5	3.8
HDS/GDS	11	8.5
Total	130	100.0

If a family chose to register their child with the community dental service a “pop-up” window was added to their electronic record to let the dentist who had undertaken the COA know. Alternatively, if children were accommodated as a result of decisions taken after a CMA (including COA) then the dental report could be passed onto the new family dentist by the child’s social worker.

We had originally intended to follow up all the children who were seen in Bridgeton Health Centre as a small sample in order to “close the loop”. This work is still ongoing.

### **5.2.9 Case reports**

To illustrate the importance of the comprehensive oral assessments as part of a comprehensive medical assessment and to demonstrate the important role that dentistry plays in child protection, a selected number of cases have been included below.

#### **5.2.9.1 Case 1 a 13 year old female**

The social worker involved with this family contacted the Child Protection Unit at the Royal Hospital for Sick Children initially for early sharing of information, followed by a further call approximately one week later requesting Comprehensive Medical Assessments for this child and her three siblings. By this stage the children had already been placed on the Child Protection Register due to chronic neglect. The social worker advised the Child Protection Unit that there was an accumulation of concerns for the family with missed health appointments for the children, particularly dental appointments. The 13 year old

female had only an 84% school attendance and was described as anxious with difficulty sleeping and possibly tired at school. She was also noted to be taking on a caring role for her younger siblings and there had been 23 phone calls to police from a neighbour regarding the garden, noise, and the children being left unattended. The child in question and one of her siblings had both been referred for bereavement counselling following the death of their father in 2009, but had only attended once for the appointments.

With regards to her dental history in particular the child had a long history of missed appointments following significant previous dental treatment in 2009 including surgical extraction of a supernumerary tooth and bonding of gold chain to an unerupted tooth. After this procedure she had missed 3 appointments with the orthodontic department and was not seen again for a further 18 months. She then attended for 4 appointments before missing a further 3 appointments within the department of paediatric dentistry and a further 1 appointment within the department of orthodontics. Two of her siblings had also missed dental appointments including appointments for dental extractions under general anaesthesia. There was no further follow up or contact from Glasgow Dental Hospital until a new GDP re-referred the patient. This new GDP has been instrumental in raising concerns about this child and the rest of her family.

The child is otherwise well and healthy looking and the only other major concern for this family were the conditions of the home which were described as of “very poor cleanliness”.

#### **5.2.9.2 Case 2 siblings in one family**

One family who were seen for COA consisted of three children aged 8 years, 6 years and 6 months respectively. When they attended for COA they were accompanied by their father. In the dental surgery it was noted that the father focused all his attention on the baby and was not interested in the older children. On extra-oral examination of the children it was noted that the two older children were dirty and smelly. Ingrained dirt was obvious on their school uniforms and their skin and hair were visibly dirty. Intra-oral examination revealed that both older children had active dental caries. The 6 year old had poor oral hygiene. The oral hygiene of the 9 year old was good around her

anterior teeth but there were plaque deposits around her posterior teeth. Both older children were very compliant for dental examination. Their father blamed the children for their dental caries saying that he tells the children to brush their teeth but they never do what they are told. The children were registered with a general dental practitioner.

In contrast when the 6 month old child was examined she had clean freshly laundered clothes and her skin and hair also appeared clean. She had two lower primary incisors present and her oral hygiene was good.

The children's father was made aware of the dental needs of the children and elected to take the children back to their own dentist for further treatment. A copy of the dental appendix to the comprehensive medical assessment was therefore sent to the children's general dental practitioner. As well as this a telephone call to check the children were indeed registered with the dentist confirmed they were registered but had failed to complete treatment. A few weeks later the GDP contacted the author to inform me that the children had not returned for their dental treatment. The author then contacted the children's social worker who was able to inform us that the children had been accommodated in another health board. In addition the social worker asked permission to pass the dental report onto the new family GDP that the children would be attending.



## Chapter 6 Discussion

### 6.1 Scottish General Dental Practitioners study

#### 6.1.1 Questionnaire design

The options of personal interviews, telephone interviews and self administered questionnaires were considered to assess the current knowledge of general dental practitioners regarding child abuse / neglect (Aday and Llewellyn, 2006). As there was only one researcher it would not have been feasible to personally interview the entire sample of general dental practitioners due to time and financial constraints. The least costly method was that of a mail based self administered questionnaire. Self administered questionnaires allow for the greatest anonymity for respondents. Additionally the use of self reported questionnaires allows some questions to be used that respondents would perhaps be uncomfortable answering in person (so called “threatening questions”). Similar problems would have been encountered using telephone interviews. It has also been reported that social desirability bias (when a respondent provides what they believe to be society’s most desired response rather than their true response) is increased in personal and telephone interviews compared to self administered questionnaires (Holbrook et al., 2003). In addition to this there are concerns surrounding the limitations of telephone surveys in reaching respondents and it has been suggested that well designed and implemented mail and internet surveys may be the best option (Aday and Llewellyn, 2006).

Once the self reported questionnaire method was decided upon the different types of self reported questionnaires were considered. These included simple pencil and paper style questionnaires posted out to the sample population, e-mail questionnaires, internet based questionnaires, and group administered settings. Internet based surveys can save time in data editing as they can correct data entry errors. They can also be dynamic in that the set of questions presented to a respondent can change depending on their answers to previous questions. It also allows cleaning of the data in that respondents cannot progress through the questionnaire unless they have answered all sections and are also unable to answer any nonsense data. In addition this method would also allow the use of visual aids in the survey. The speed of turn around of internet based

surveys can be faster as the data collection period can be reduced along with the previously mentioned advantages. There are however disadvantages to this method as only those with computer access can be included in the sample and either a web-based survey host must be used, or prior specialist knowledge must be gained in the design of such surveys. The response rate for internet questionnaires is also reported to be lower than that for self administered mail questionnaires (Leece et al., 2004).

E-mail surveys again restrict the sample population to those with computer access and those who are IT literate. This would also have involved gaining a list of e-mail addresses for all the potential study population and this is not available at present for all the general dental practitioners in Scotland. Some may also feel it an invasion of privacy to receive an unsolicited e-mail to addresses which may be personal rather than business addresses. Unlike internet based surveys, e-mailed questionnaires do not allow for cleaning of the data so do not have this advantage over mail surveys.

The questionnaire had 34 items that consisted of mainly yes/ no questions. A few of the items were multiple choice and there were spaces included for respondents to add comments. It has been suggested that this design is useful in self reported questionnaires as respondents may be unwilling to answer complex or open ended questions due to time restraints or possibly limited writing skills. The covering letter was kept short as this has been found to increase response rates (Edwards et al., 2009), however response rates are known to be lower in surveys which do not have previous invitation letters and this may have contributed to the response rate in this research.

### **6.1.2 Pilot questionnaire**

Having the responses of a group of 30 VTs and 6 GDPs was very useful in developing the questionnaire and their provision of feedback on the questionnaire improved the internal validity of the questionnaire. It may be argued by social scientists that pilot study results should not be used to test a hypothesis and that the results from the pilot study should not be included with the results from the main study (Peat et al., 2002). However these pilot studies provided some very interesting results, especially with regard to the VTs. VTs

are inexperienced and have not had as much exposure to the increasing profile of child protection training. However they are recent graduates and this may raise questions with regard to their undergraduate training in child protection. However it may not necessarily be the content of their training, but perhaps the method of delivery. Traditionally training in child protection was lecture based, but as new curriculums become orientated toward more problem based learning, perhaps child protection training should also be delivered in this manner also. This led us to develop scenarios for use in child protection training for dentists and the rest of the dental team. These consist of 4 different scenarios and can be seen in Appendix 9. So far these scenarios have been used in the teaching of dental foundation trainees, vocational trainees, senior house officers and “section 63” courses for dentists and other members of the dental team. Feedback from these courses has been very good with many comments received stating that the scenarios were the most useful aspect of the study day.

### **6.1.3 *Final questionnaire***

#### **6.1.3.1 Demographics**

The proportion of dentists responding from each health board was approximately equal to the proportion of total dentists from each health board. The percentage of dentists working in independent practice was also similar to that for Scotland as a whole (ISD Scotland, 2011a). Just over half of respondents were male. Dentistry was traditionally a male dominated profession but this has changed over the past 20 years or so with more female graduates. This is reflected in that the majority of respondents with less than 20 years experience were female.

#### **6.1.3.2 Training and access to child protection guidelines**

Thirty percent responded that they had received child protection training as an undergraduate. This is higher than found by Cairns et al in 2005. The more recently qualified dentists were more likely to have had child protection training as an undergraduate ( $p < 0.001$ ). Fifty-five percent of respondents had received some postgraduate training in child protection which is more than double that found by Cairns et al in 2005. The vast majority had this training in the form of a

“one off” lecture. There has been an increase in the amount of child protection training available to dentists in Scotland since 2005, most notably the inclusion of child protection in section 63 courses in Scotland. Child protection is also one of the topics covered in most vocational training schemes in Scotland. However, at present child protection is not included as a mandatory topic which dentists must cover in their five year continued professional development (CPD) cycle.

Twenty-two percent of GDPs returning this questionnaire had been sent a copy of their local area child protection guidelines. This is higher than found in a previous study (Cairns et al., 2005a). Since this previous study all dental practices in Scotland were sent a copy of “Child Protection and the Dental Team” manual. This study found that over half of the responding GDPs had read this document. However as all the dental practices were sent the manual and in addition it is freely available online, it remains disappointing that this number is not higher.

A suggestion to improve this result would be the inclusion of child protection training as a mandatory part of CPD for dentists. Currently the General Dental Council require that dentists undertake at least 250 hours of CPD over a five year cycle. Of these 250 hours a minimum of 75 hours must be verifiable. Verifiable CPD must have documentary proof, quality controls, concise educational aims and objectives, and clear anticipated outcomes. There are currently three core subjects which the GDC strongly recommend are completed as part of a dentist’s verifiable CPD. These include medical emergencies (10 hours per cycle), disinfection and decontamination (5 hours per cycle) and radiography and radiation protection (5 hours per cycle). The GDC also recommends that dentists keep up to date on legal and ethical issues (General Dental Council, 2005). Child protection may come under these headings but there is currently no requirement for dentists to include training in child protection as part of their CPD. However it is encouraging that the percentage of Scottish GDP’s with access to some form of guidance regarding child protection procedures has increased in comparison to the findings of Cairns et al in 2005.

We understand that the GDC are currently reviewing their CPD requirements and have had correspondence with the author about the inclusion of child protection training as a mandatory component of the five year CPD cycle.

Despite this increase in the proportions of dentists with child protection training or who had read “Child Protection and the Dental Team” there was a large number of GDPs who wanted further training in identifying and reporting cases of neglect (73% and 78% respectively). Also over two thirds of respondents still did not feel adequately informed about child protection issues. This desire for further training and a feeling of being inadequately informed about child protection issues replicates the findings of Cairns et al in 2005.

### **6.1.3.3 Practice**

Over a third of the dentists had suspected child abuse/ neglect in one or more of their paediatric patients. This is higher than the results found by Cairns et al in 2005 and may suggest an increased awareness of child abuse/ neglect among dentists. A significant number of those dentists who had suspected abuse/ neglect had either had some form of child protection training or had seen “Child Protection and the Dental Team” ( $p < 0.001$ ). This could suggest that better training and access to the manual increases awareness but this cannot be assumed. Another suggestion to explain this difference could be that those dentists who have suspected cases of abuse/ neglect have actively sought out training opportunities or read the manual to help them decide whether to refer the case or not.

Seventeen percent of the dentists admitted they had suspected a case of child abuse/ neglect but had not reported it. This is slightly lower than the results from the 2005 study which may suggest that more of those dentists who do suspect cases are referring them. The fact that the percentage referring cases is also slightly greater than the study by Cairns et al gives further support to this hypothesis. For those who admitted that they had suspected but not referred only 81% had recorded their suspicions in the clinical notes. This is higher than the number found in 2005 but it is still lower than found by John et al in an Australian study (John et al, 1999). Dental defence unions constantly stress the importance of maintaining good, accurate records. In suspected cases of child

abuse/ neglect it is important not only to document the clinical findings and supplement these with clinical images where possible, but also to include what advice has been given to the parent/ caregiver. This is especially important in cases where the dentist who has examined the child may be called to give evidence in a child protection case. If the dentist has not documented that they have given diet and oral hygiene advice the parent or caregiver could argue that they had never been told this was necessary.

The majority of responding dentists thought that children who are abused or neglected are more likely to have dental decay. Previous work by Green et al (1994), Valencia-Rojas et al (2008), and Montecchi et al (2009) have shown this to be the case in the USA, Canada and Italy respectively. In section 5.2 of this work it has been demonstrated that this also appears to be the case in Scotland for children with identified welfare concerns and this will be discussed more fully in section 6.2. It is also well known that children who are most dependent on their carers and least able to communicate are more vulnerable to all types of maltreatment.

#### **6.1.3.4 Factors influencing practice**

The most common reason for not referring a suspected case of child abuse/ neglect was a lack of certainty of the diagnosis. Having had child protection training did not appear to make a statistically significant difference to certainty about the diagnosis ( $p=0.1$ ), even though dentists attending these courses are assured that it is not their job to diagnose child abuse. A lack of certainty about diagnosis was the most common reason for not referring in the 2005 study; however, the proportion of dentists who cited this as a reason is 14% lower in this study. Dentists need to be reassured that it is not their job to make a diagnosis of child abuse or neglect and this is emphasised in the recent Child Protection Policy Document from the Scottish Government (Scottish Government, 2010a). The dentists' responsibility is to share their concerns about children's welfare or suspicions of child abuse/ neglect and to pass on information they hold. This must be done with the child's best interests at heart.

Fear of violence to the child and fear of consequences to the child from the involvement of statutory agencies were the second and third most commonly cited reasons for not referring. Unfortunately there was no significant difference between those who had training or had seen the manual and those that hadn't for either of these factors. The proportion that cited fear of violence to the child was higher than that reported in the 2005 study and this may reflect recent high profile deaths of children at the hands of their abusers in the UK. It should be borne in mind however that informing patients/ carers when you pass on your concerns to other agencies allows social services etc to offer help to the whole family.

The fact that GDP's, regardless of whether they have had child protection training or have read "Child Protection and the Dental Team", are still concerned about the consequences to children from the involvement of statutory agencies may suggest that more inter-agency training is required. The topic of "What happens next?" is covered in section 3 of "Child Protection and the Dental Team" and is also covered in child protection training, but as this is something the dentist cannot control there may need to be further reassurances given to dentists about what happens after they raise a concern. This may help to allay dentists' fears if they understand what steps are taken by the other agencies involved. It is also useful for dentists to be able to access and be reassured by national statistics for Social Work in Scotland. These show that although in the year 2010/11 there were 5234 initial and pre-birth case conferences in Scotland, there were only 3884 children whose names were added to the child protection register, and many of these children were on the register for less than a year (Scottish Government, 2012).

Severe untreated dental caries on its own is concerning but does not always equal neglect. If a dentist has pointed out a child's dental problems and offered appropriate and acceptable treatment there are various factors that may then lead the dentist to have concerns about the child. In this study we asked the GDP's about 4 of these factors which are mentioned in the BSPD policy document (Harris et al., 2009a) and "Child Protection and the Dental Team" (Harris et al., 2006). Less than half of all the GDPs answering this question would be concerned by irregular attendance, failure to complete treatment, returning in pain at

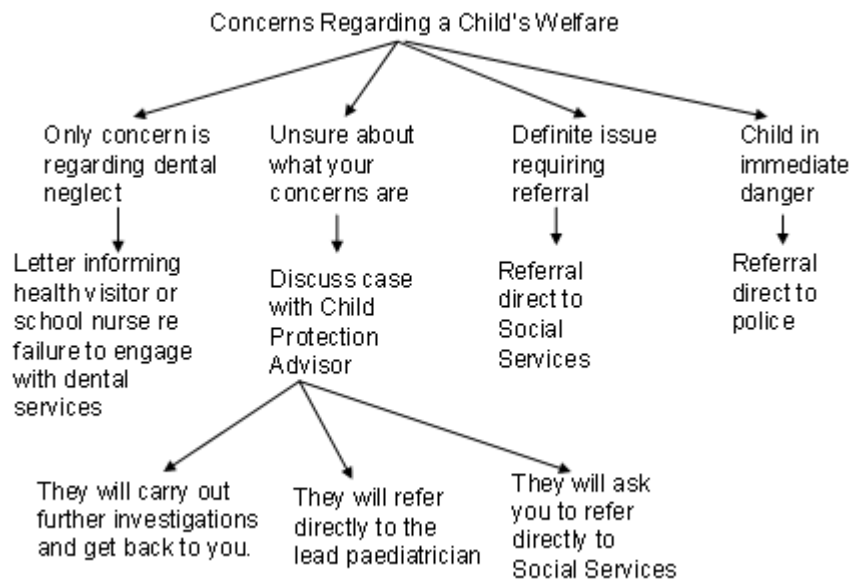
repeated intervals or requiring repeat GAs for extractions. A significantly higher proportion of GDP's who had child protection training or had read "Child Protection and the Dental Team" were concerned about these issues. All these factors are indicators of dental neglect (Harris et al., 2006; Harris et al., 2009a). This suggests that training in child protection or having read the manual makes dentists more aware of the issue of dental neglect on its own, and as part of the wider picture of general neglect.

#### **6.1.3.5 Child Protection procedures**

The majority of GDP's in this study would refer a suspected case of child abuse/neglect to their child protection advisor with the next most common referral agency being social work. This is encouraging as this study has already shown that the biggest barrier to referral is uncertainty over the diagnosis of abuse/neglect. As discussed previously the diagnosis of child abuse/neglect is not the responsibility of the dentist so being able to pass on your concerns to someone else who is experienced in child protection can be very reassuring for the dentist. This also ensures that each case can be investigated appropriately. Child Protection Advisors usually have a background in nursing and postgraduate qualifications in child protection. In Greater Glasgow and Clyde there are six Child Protection Advisors who all have a background in health visiting and as well as their postgraduate qualifications they have many years of experience in supporting and advising their colleagues in the health service. NHS Greater Glasgow and Clyde have produced a document called "Dental guidance for staff who suspect child abuse or neglect" and it is hoped that this will again highlight to dentists that it is not their duty to diagnose child abuse and neglect, but it is expected that they will share their concerns and know the most appropriate person, or agency to share their concerns with. Other Health Boards and trusts will have similar documents.

The next most common agency to refer to was social work. Figure 6.1 illustrates what action to take when a dentist has concerns over a child's welfare. Being confident enough to refer directly to social services is very important.





**Figure 6:1 Flowchart for dentists of what to do when they have concerns regarding a child's welfare**

(Courtesy of Dr A. M. Cairns)

Although 60% of respondents would refer suspected cases to their child protection advisor only 31% knew who their child protection advisor was. A significantly higher proportion of GDP's with training or who had read "Child Protection and the Dental Team" knew who their child protection advisor was. Identifying your local child protection advisor is emphasised in child protection training and "Child Protection and the Dental Team" gives an example flow chart of what to do if you have concerns about a child's welfare which has a space to allow GDP's to write in the names and contact numbers of their local child protection nurse.

In this study 84% of respondents would prefer to discuss their suspicions with a dental colleague before referring a suspicious case. This is unsurprising as it is likely the dentist will feel more comfortable discussing their concerns with someone whose responsibilities and service commitments they understand rather than a service to whom they may never have dealt with before. Similarly when the GDP's were asked if there was anyone not mentioned in the questionnaire that they would prefer to discuss a suspicious case with or refer a case, then the most common answer given was the child's medical practitioner. However general medical practitioners may have similar barriers to referral as GDP's and

therefore sharing information with a local child protection advisor is likely to be more beneficial.

It is heartening to note that nearly two thirds of dentists are willing to get involved in detecting neglect despite the barriers that they feel stand in the way to referring concerning cases. This is encouraging and hopefully with more training and resources GDP's will feel more able to refer and not keep their concerns to themselves.

## **6.2 Comprehensive Oral Examinations for children with welfare concerns**

### **6.2.1 *Set up of clinics***

Setting up clinics to include a comprehensive oral assessment as part of a comprehensive medical assessment is something which has never been reported in the literature. The idea for CMA's has been around since the late 1990's and it is recognised that medical staff should have more of a role in informing those who make the decisions on the welfare of children. The model we have produced can be replicated elsewhere and it does add to the information available to those people making the very difficult decisions with regard to what is best for children with identified welfare concerns.

Rather than simply looking at children once they have been confirmed as suffering abuse or neglect, is it not more ethical for dentists to be involved in the information gathering stage when these welfare concerns are first highlighted? At this stage dentists can bring their information forward and be a voice for some of the most vulnerable children in society rather than being satisfied that we have identified oral health problems in children who have already had interventions because of confirmed abuse/ neglect.

In turn we hoped that this would help dental services respond to the needs of these vulnerable children and lead to the development of care pathways for management of dental neglect. These plans were designed to meet with the recommendations set out in the British Society of Paediatric Dentistry's policy document on Dental Neglect (Harris et al., 2009a).

The added benefit for the children seen at these clinics was a holistic approach to the identification of medical and dental needs. This health information was easily collated and interpreted to provide a comprehensive report for Child Protection Case Conferences. It also provided appropriate professionals to attend case conferences when required and allow immediate referral of these children into the services they require. As well as a full verbal opinion, provided to the parent/ carer and social worker, a standard clinical data collection sheet and report of the examination was also completed. Using a clinical pro forma or check list has been reported to be beneficial in allowing the clinicians to concentrate on complex issues while the simple ones are addressed for every patient, every time (Weiser et al., 2010)

The “Dental appendix to Comprehensive medical assessment Report” was requested by the medical paediatricians as they wished to have the results of the dental examination reported by a dentist rather than have to summarise the findings themselves.

Ideally COAs would have taken place on the same day as the medical, but in reality the dental clinics were sometimes fully booked and the dentist offered an appointment as soon as they could, but this was often on a different day.

The paperwork used for the CMAs is now standardised across all the sites where the CMAs take place. Every 6 months a reminder of the current format is sent out with any revisions, should they be requested by the dentists staffing the CMAs, or our medical colleagues.

With so many sites involved it can be difficult to ensure that every child receives dental input into their CMA, especially as the dentists have no protected time to examine these children. To combat this a database of the dental data is kept on a password protected Safestick® and this is reviewed at regular intervals with staff from the Child Protection Unit to endeavour to address areas where children have failed to receive their COA.

## **6.2.2 Challenges**

### **6.2.2.1 Management support**

There were many challenges to overcome in the development of comprehensive oral assessments for children with a welfare concern. Support from management in the Oral Health Directorate of Greater Glasgow was essential to start the clinics but also to maintain them as they will continue after this research project. This was achieved by regular meetings and update e-mails to management. Understandably management wanted to quantify the clinical involvement that would be required for the clinics from the start, but this has been difficult.

### **6.2.2.2 Development of roles and responsibilities of dental co-ordinator**

The roles and responsibilities (Appendix9) document was developed bearing in mind the guidance from Protecting Children and Young People: Framework for Standards (Scottish Executive, 2004b) which states that professionals who work directly with children should understand child development and be skilled and experienced in communicating with children. They should understand the impact of parents' behaviour on the well-being of their children and know what action to take to protect the interests of each child, and make sure it is taken. They should also be knowledgeable and skilled in making informed assessments, plans and decisions; able to account for their assessments and decisions and competently present these in court, at hearings or in meetings; skilled in inter-agency working; and understand the role and contribution of other professionals. In addition these professionals should be equipped to deal with difficult situations including conflict and be supported by their colleagues and agencies and have systems in place to monitor this. They should also know the limits of their own knowledge and expertise and call on the skills of others or specialist services when needed. Importantly these professionals need to keep up to date with relevant legislation, research, good practice and guidance and their agencies should support them to do so. These are skills which are part of the curriculum of specialist training in paediatric dentistry in the UK.

### **6.2.3 Demographics**

In this study dental/ oral data was not available for all the children who were referred for a CMA. This may have been due to the dentists involved simply forgetting to pass on the data to the investigator. However, there is a more serious and concerning alternative which is that some children may not have received a COA. Efforts are being made to review the reports of the children with “missing” data to see whether they did indeed have any dental input into their CMA’s. The number of children seen for a COA fluctuates from month to month, with no real pattern evident over a year. Children are referred to the CPU for a CMA (including a COA) most commonly by social workers and health visitors and there is no way to predict when the busiest times will be. This is the nature of child protection as it is difficult to predict when a child will be in need.

The numbers of children across the different sites is similar for the north, east and west sites but was far lower for those seen in the sites that are in the south of Greater Glasgow, namely Southbank and Gorbals. This is due in part to there being no permanent dentist based at this site. The children can sometimes be taken by taxi to the centre at Bridgeton which is the next closest site, but this is not always possible. Efforts are also made to arrange the COA for another day when there would be a dentist based at the Gorbals but this has proved problematic with the children and their families much less likely to attend a second appointment. Both of these reasons also contribute to the missing dental data for a proportion of the CMA children.

The range of ages for children receiving a COA as part of their CMA was from less than 1 year old up to and including 16 years old. In Scotland this fits with the definition of a child in law and policy documents. This range of ages is far greater than has previously been reported in studies which have sought to describe the oral or dental health of children with welfare concerns (Greene et al., 1994; Olivan, 2003; Mezzich et al., 2007; Valencia-Rojas et al., 2008; Montecchi et al., 2009). These authors have all included a control group in their studies to compare their study groups with a control. In addition these authors only investigated children who were confirmed cases of abuse /neglect. Unlike these authors this study included all children with welfare concerns who were

referred for a CMA and not just those who then became confirmed cases of abuse/ neglect. This allows us to describe the demographics of all these children and does not try to compare them to a control group. On the advice of statisticians at the start of this project, it was decided that a control group would be nearly impossible.

The majority of the children who received a COA were of primary school age (5-11 years). This is interesting to note as the pattern for age groups of children who are on the child protection register is different. The registrations on the child protection register follow a chronological pattern with the largest numbers of registration being for children under 1 year old. However in this study there were very few children under 1 year old who were referred for a CMA due to welfare concerns and none of the children aged 1 year and younger who were seen had any evidence of oral or dental disease.

All of the children who received a COA as part of their CMA lived in the 3 most deprived SIMD quintiles, with the vast majority (81%) living in postcode areas which had a SIMD quintile of 1. In Glasgow it is estimated that 34% of children live in poverty and this equates to some 37,500 children (The Glasgow Indicators Project, 2009). Although it has been shown that child abuse and neglect do occur in all social classes it is often reported more frequently in families of a lower socioeconomic status. Although poverty itself is not an indicator of child abuse and neglect it does cause extra pressures on families. This research suggests that welfare concerns for children are more common in families from deprived areas and this is in keeping with previous research.

In this study 69% of the children were reported to be registered with dental services. This is far lower than the results available on the Information Services Division (ISD) Scotland website. They report that at June 2011 85% of all children in Scotland were registered with a GDP, and in Greater Glasgow and Clyde it was 85.6% (ISD Scotland, 2011b). However, in this study we did not check registration using the Community Health Index (CHI) number and were merely relying on the responses from the parents, carers or children themselves.

## **6.2.4 Caries Experience**

### **6.2.4.1 Comparison to National Statistics**

The number of decayed, missing and filled teeth in the children attending for CMA's was recorded in order to describe the dental health of this vulnerable group of children. As there is a high caries rate in children in Scotland, and Glasgow in general, it is useful to bear in mind what the results of recent National Dental Inspection Programmes (NDIP) are. In Scotland these inspections are carried out every year on primary 1 and primary 7 children, with a detailed inspection being carried out on each age group on alternate years. The most recent statistics for primary 1 children were published in 2010 (Macpherson et al., 2010), and 2011 for the primary 7 children (Macpherson et al., 2011). In the 2010 NDIP inspection some 64% of P1 Children in Scotland and 58.2% of P1 children in Glasgow were decay free. The average dmft for all P1 children in Scotland was 1.52 (Glasgow 1.85) but for those with obvious decay experience (dmft>0) it was 4.19 (Glasgow 4.41). The proportion of children in Scotland with current decay (dt>0) was 28.9%.

In this study decayed, missing and filled teeth in the primary dentition was reported for all children 9 years old and younger. As a result it cannot be compared directly to the national results as the children in the national inspection programme are all 5 years old. This study did include twelve children aged 5 but this number was not enough to make valid statistical comparisons with the national statistics. Regardless of this the results of this study do begin to describe the oral health of children with welfare concerns. The mean and median ages of the children aged 9 years and below were 4.68 years and 5 years respectively so mean national scores for 5 year olds in Scotland do allow us to put these results into perspective.

Of all the children aged 9 years or younger only 32% were caries free. This is far lower than the national average of 64%. One reason for this could be that the sample included some older children who would be more likely to have caries because their teeth will have had longer to be exposed to dietary sugars. Alternatively the sample also included younger children who would have had their primary dentition for a far shorter time, and even some children whose

primary dentition was not yet complete. The average dmft in the primary dentition was 2.52 which again is higher than both the national average and the average for Glasgow. When looking at the component indices of dmft both the mean number of decayed teeth (1.96) and missing teeth (0.8) were higher than the national (1 and 0.33) and Glasgow (1.31 and 0.33) means. This suggests that children with a welfare concern who are referred for a comprehensive medical assessment may have more untreated decay and more teeth missing due to dental caries than their peers. The number of filled teeth for the study group (0.07) was lower than the mean number of filled teeth both nationally (0.19) and locally (Glasgow 0.2). This may suggest that this vulnerable group have more difficulties accessing appropriate dental care when their dental caries is still able to be treated by restorative means rather than extraction. This is shown in an alternative way by the care index (care index = ft/dmft) which was only 2.8% for the study group compared to 12.5% nationally.

The NDIP surveys also look at the influence of deprivation on caries experience. In the 2010 NDIP survey some 46.5% of primary 1 children who lived in SIMD 1 areas were caries free. In this study there were 75 children aged 9 years and younger who lived in SIMD 1 areas and only 32% of them were caries free.

The older age group in this study consisted of 35 children aged 10 years and over with a mean age of 12 years. DMFT scores were collected for these children and these can be compared to the NDIP results from 2011 for primary 7 children. In this study only 17% of children ages 10-16 years were decay free. In Glasgow 62.6% of 12 year olds are decay free and in Scotland as a whole this figure is 69.4%. The mean DMFT was 5 for the study group (DT = 3.6, MT = 0.7, FT = 0.9). This is far higher than the national average for 12 year old children which is 0.7 (made up of DT = 0.23, MT = 0.1, FT = 0.37) and 0.89 in Glasgow (made up of DT = 0.31, MT = 0.11, FT = 0.47). For 12 year old children with caries experience the mean national DMFT is 2.32 and the mean for Glasgow is 2.4. Again this was far higher in the children aged 10 and over who received a COA as their DMFT was 6. The care index for the children aged 10 and over was low at 18% compared to the national mean of 52.8%

In the NDIP sample in 2011 the proportion of primary 7 children living in a SIMD 1 area who were caries free was 53.5%. In this study sample the proportion of



children aged 10 years and older who lived in a SIMD 1 area and were caries free was far lower at only 16.1%.

The results of the study compared to the national statistics suggest that children who are referred for comprehensive medical assessments, and who receive a comprehensive oral assessment as an integral part of this, may be more likely to have experienced caries than their peers. Previous work has suggested that social deprivation or low socioeconomic state may be contributory factors. It is already known in Scotland that social deprivation is a caries risk factor. Despite this even those children in the study who are in the lowest SIMD classification appear to be less likely to be caries free than their peers in the same SIMD classification nationally. This is not altogether surprising as the families in the study group are among the most vulnerable in society. Other authors have suggested that poor hygiene and nutrition, lack of the perceived value of oral health, family isolation, educational failure, and wilful neglect by care givers may be reasons for higher rates of untreated decay in abused children. In this study there were often cases where the children did not attend school or nursery on a regular basis. They are therefore more likely to miss out on nursery and school based preventive programs such as Childsmile in Scotland (Macpherson et al., 2010; Turner et al., 2010; McMahon et al., 2011). In some families there was a failure to engage with any health or social services and therefore dental health was also neglected.

#### **6.2.4.2 Oral Health compared to previous research**

It is difficult to compare the results of this data with that of Greene et al in 1994. In their study they used logistic regression models to look for the significance of various variables on the oral health status and presence of untreated decay in their study sample. It was in the untreated decay model that they found that the odds ratio for abused compared to non-abused children will have untreated decayed was 8. In other words they found it was eight times more likely that an abused child would have untreated decay than their non-abused peers (Greene et al., 1994). This present study does not examine the data in the same way. However the results from the DMFT values in the permanent dentition do seem to suggest that a higher proportion of children in this vulnerable group have had more decay experience than their peers both

locally and nationally and they also have a far lower care index. This would seem to suggest they are more likely to have untreated dental decay than children who are not referred for comprehensive oral assessments.

In a letter in the *European Journal of Public Health* in 2003 Olivian looked at 236 physically abused children aged 6-12 years (mean 9.6 years). He found untreated decay in 50.4% of his study group with a mean dt of 1.29 and DT of 0.61. His results agree with this study in that the prevalence of untreated decayed teeth was higher than the national values, in this case the national values for Spanish children (Olivian, 2003).

Similarly in 2008 Valencia-Rojas et al looked at 66 preschool children (2-6 years) who had been admitted to the Children's Aid Society of Toronto. They found evidence of early childhood caries in 58% of the abused children and in those with caries the dt value was 5.63. For the whole sample the dt was 3.24 and none of the children had filled or extracted teeth. This was higher than the local Toronto values for children where only 30% of 5 year olds have caries and the mean dt was 0.42 (Valencia-Rojas et al., 2008). Once again the caries rate for the vulnerable group of Toronto children was higher than that of their peers and this agrees with the present study. Montecchi et al (2009) also looked at the amount of untreated decay in 52 children affected by violence and they found a statistically significant difference between their control groups and study group, with more decay present in the study group.

Mezzich et al's work in 2007 suggested another reason that dental decay may be higher in children with welfare concerns. Their study group of interest were children of substance abusing fathers and they found that among neglected children the number of carious lesions was higher in children who themselves had substance abuse issues. They suggested that failure to satisfy a child's physical, emotional, and educational needs, particularly during adolescence, induces stress that may lead to psychological deregulation and subsequent substance abuse (Mezzich et al., 2007). Our present study did not record whether the children themselves were abusing drugs or other substances and this may have been a contributing factor to the high caries rates found, especially in the children aged 10 years and over.

### **6.2.5 Trauma, hypoplasia and oral infection**

The proportion of children with trauma across all ages was 7.7%. When this was split into the two different age groups the proportion of children who had experienced trauma was 7.4% in children aged 9 years and younger and 8.6% in those aged 10 years and older. Other literature quotes the rates of dental trauma in 5 year olds as 31-40% in boys and 16-30% in girls (Welbury and Whitworth, 2005) and accidental damage to permanent teeth as 5% in 8 year olds and 13% in 13 year olds (Chadwick et al., 2006). It would appear that the rates of dental trauma in the children referred for comprehensive medical assessments are lower than these quoted rates for the general population, but the overall numbers of the CMA children were small. In addition previous dental notes were not available for the children examined and the comprehensive oral assessment paperwork did not include a section to ask specifically about trauma. Instead it was included in the “other” section for the clinical examination. It may be the case that some of the dentists forgot to ask specifically about dental trauma.

The prevalence of molar-incisor-hypomineralisation varies greatly and a recent review quoted prevalence as 2.4 - 40.2% (Jälevik, 2010). When looking at values in the United Kingdom research has shown that the prevalence here is between 14.6-40% (Zagdwon et al., 2002; Balmer et al., 2005). In this study the examining dentists were asked to say whether there was any evidence of enamel defects affecting any teeth. For the whole group the prevalence was 5.4% (n=7) with a higher proportion of children aged 10 and over affected than the younger age group (11.4% compared to 3.2%). These values do sit within the very broad global values but appear to be lower than the British values. However, like the trauma comparison, the numbers in the CMA group are very small. The numbers in this study may reflect the high caries rate in these children which has already been discussed. As hypoplastic/ hypomineralised teeth are more prone to caries anyway, the enamel defect may be masked by the caries which is present. Additionally if hypoplastic teeth had previously been extracted they would not have been recorded as having an enamel defect at the COA.

None of the children in this study had any signs of soft tissue infection. Abscesses and sinuses due to dental caries were not counted in this part of the assessment.

### **6.2.6 Plaque indices and BPE scores**

In this study the plaque indices were only collected for 77% of the children examined. Of these children only 16% had a plaque index of 0 and all the rest had visible plaque deposits on their teeth. The mean plaque index for all the children who did have their plaque index recorded was 1.49 which indicated that oral hygiene required improvement. In previous research by Montecchi et al in 2009 they compared the plaque indices of abused children to those of a control group and other children with psychological disorders. They found that the plaque index was significantly higher in the abused group. In this study we have no control group to compare the children with, but it appears that the mean plaque index for children with welfare concerns indicates their oral hygiene requires improvement.

The mean BPE scores for the children aged 7 years and over in this study was 1.09 but only 5 children (6%) were found to have mean BPE scores of 0. Unfortunately BPE scores were only recorded for 63.5% of the children aged 7 years and over. It was disappointing to note that 94% of the children who did have their BPE scored recorded had mean BPE scores of greater than 0 which suggests some evidence of gingival inflammation in these children.

In general the plaque index and BPE score were not well recorded. In the training session these items were not discussed as the training focussed on caries. This certainly will have impacted on the recording of these scores, although all the dentists were given a reference sheet with all the required codes and indices.

### **6.2.7 Tooth wear scores**

Tooth wear scores were recorded for 65% of the children examined. This again is a low recording rate and again this subject was not covered in the training exercise. Of the children who did have their tooth wear scores recorded only 4 children had evidence of tooth wear on their permanent anterior teeth and 16

had evidence of wear on their primary anterior teeth. It is difficult to put these results into context of tooth wear at a national level. Previous research has shown that 53% of 5 year olds and 33% of 12 and 15 year olds have evidence of tooth surface loss (Chadwick et al., 2006). In this study for children aged 9 and younger tooth wear was noted in 25% of the children for whom tooth wear scores were recorded and for those aged 10 and older this figure was 18%. This certainly appears to be lower than the national figures. In the younger age group 9 children who were examined were excluded due to either extensive caries in their anterior teeth or that the primary teeth had already exfoliated, or been extracted and the permanent successors were unerupted. This may have affected the amount of tooth wear recorded.

### ***6.2.8 Developing care pathways***

Of all the children seen for COAs 69% claimed to be registered with dental services. This may have been either the general dental services or the community dental services. Following the COAs 54% chose to have their required dental care provided by their general dental practitioners. This is an important finding as it is well known that dentists are well placed to identify signs of child abuse or neglect. However as section 6.1.2.3 has already discussed there continues to be a gap between the number of dentists who suspect cases of child abuse or neglect and those who actually refer the cases. Although the profile of the dentist's role in child protection has increased over recent years much work still has to be done to support dentists when one of their child patients is identified as having a welfare concern. The British Society of Paediatric Dentistry recently published a policy document on dental neglect (Harris et al., 2009) which suggests 3 levels of intervention that would be appropriate when a dentist has concerns regarding dental neglect in a child patient. In addition to this it will be necessary to increase the profile of the comprehensive oral assessments among GDP's in Greater Glasgow and Clyde so that GDPs understand the purpose of the assessments and what is required of them before and after their patients are seen for a COA.

Over a third of the children seen for COAs chose to have their future dental care in the community dental service. They could choose to attend their local community dental service if this was not where the COA took place. When they

chose this option a “pop-up” window to ask the CDS dentist to contact the examining dentist of the COA was added to their electronic patient record. This electronic record is accessible throughout all of the community dental services in Greater Glasgow and Clyde and means that should the child fail to attend local services then the dentist who undertook the COA would be informed. This allows the dentist to contact the child’s social worker to inform them that the family have not kept to the agreed treatment plan.

Some of the children required joint care between hospital dental services and the community dental service (3.8%) or general dental service (8.5%). This was usually when the child required a general anaesthetic for some of their future dental care. A direct referral pathway was agreed from the COAs and the COA mentioned in the referral letter. This allowed the referrals to be vetted appropriately by the hospital dental service and reduced the time delay in waiting for general dental practitioners to refer. In the hospital dental service the booking system for appointments is now “patient focused booking”. This means that when a referral is received and vetted the patient receives a letter asking them to call to make an appointment. If they do not call to make an appointment they are removed from the waiting list. While this may be appropriate for adults and the majority of children I would argue that in the cases of these most vulnerable children it is not as appropriate, especially where there has been a history of failure to engage with health services. In these cases it may be more appropriate for the child and family if an appointment is made and sent out to the family and a copy of this then sent to the social worker involved with the family so they can assist with getting the child to the appointments.

### ***6.2.9 Learning points from case reports***

#### **6.2.9.1 Case 1 a 13 year old female**

This case is unusual as it was due in part to the child’s new GDP that her family were brought to the attention of firstly social services and then the Child Protection Unit. Clearly there were other issue in this child’s life and other people had raised concerns, most notably a neighbour. It was also noted that the child had a less than perfect attendance record at school. However the main

issue was the long standing problem with missed health appointments, most notably dental appointments. It can be argued that in the past there had been good reasons for missed appointments with the child's mother being ill and then her father passing away. However, perhaps an earlier chance to help this child was missed by the hospital dental service. After the block of missed appointments following her general anaesthetic for dental treatment she did come back and at that stage the social difficulties were noted, however after this she then failed to attend again and only a standard letter was sent out to the family telling them they had been discharged from the dental hospital according to hospital policy. Was this standard hospital procedure correct for this child? In the BSPD policy document (Harris et al., 2009a) it recommends that missed appointment policies should not be punitive. The child required close follow up by the orthodontic department and the social difficulties had already been noted. I would argue that this was an opportunity missed to help this family. It also illustrates how easy it is to miss vulnerable children when working on a busy clinic. This scenario will be presented at an upcoming clinical governance meeting to avoid a similar situation occurring in the future.

In addition to this it was noted that this child's siblings had also missed appointments for both assessment at the dental hospital and later appointments for dental extractions under general anaesthesia. In a large dental hospital there is often no way of knowing the attendance history of a child's siblings which is different from general dental practice where a dentist and the dental team knows the family more closely. In this case it should have raised alarm bells with the child's previous GDP when they received letters saying the children had failed to attend their appointments. These specific issues are mentioned in the "Child Protection and the Dental Team" document (Harris et al., 2006) that was sent to all dental practices in 2006 and is also available online ([www.cpdtd.org.uk](http://www.cpdtd.org.uk)). It may be that the original GDP for this child was one of nearly half of GDPs in Scotland who have not read this document as discussed in section 6.1.2.2.

#### **6.2.9.2 Case 2 siblings in one family**

In this case the older siblings in the family were obviously dirty and smelly on extra-oral examination. This was in stark contrast to their baby sister who

appeared clean and well cared for. This highlights the point that it may not be all children in a family who are neglected or abused, but that does not help those who are being maltreated. This is important for dentists to be aware of, especially those dentists who do not see all the children in a family, as it highlights the importance of taking good, accurate family histories. Examination of these older children revealed gross caries. The children were indeed found to be registered with a GDP, but on speaking to the GDP it was found that the family were irregular attenders. The children were very compliant during the examination and the GDP agreed that they had also been compliant with previous treatment. Despite this and the appearance of the older siblings no concerns had been raised by the GDP. Again these factors are mentioned in the dental neglect section in “Child Protection and the Dental Team” (Harris et al., 2006).

This second case also highlights the importance of information sharing. Without informing the GDP that their practice patients had been subject to a CMA and were requiring dental treatment, the GDP would not have been aware of the increased importance of adequate follow up for these children. Additionally if the GDP had not contacted the examining COA dentist to share the information of the subsequent failure to attend it may never have been discovered that the children had been accommodated. It could be argued that this could have been avoided if the social worker involved in the case had contacted the referring dentist earlier to request a copy of the dental report be sent to the GDP of the new foster family. “Sharing Information About Children At Risk: A Guide to Good Practice” (Scottish Executive, 2003c) states that when any professional or agency approaches another to ask for information they should be able to explain: what kind of information they need, why they need it, what they will do with the information and who else may need to be informed if concerns about a child persist. In 2003 the Scottish Executive were about to develop a strategy to integrate the Scottish Birth record, existing child health surveillance programmes, immunisation programmes, Accident and Emergency services, hospital clinical information, and other clinical information systems in the design of a single record (Scottish Executive, 2003c). They envisaged a single entry point for all health agencies to a common core child health record with access for other professionals under specific conditions. This would certainly be helpful



and a big step forward in being able to share information in a timely manner for the benefit of children's welfare.

## Chapter 7 Conclusion

### 7.1 Scottish General Dental Practitioners questionnaire

In this study 37% of general dental practitioners in Scotland have suspected child abuse or neglect in their paediatric patients but only 11% have referred suspected cases of child abuse. In the last 6 months before the questionnaire 6% of GDPs had seen a definite case of child abuse/neglect. The majority of cases are referred to child protection advisers. The Scottish general dental practitioners' decision to refer, or not refer suspected cases is influenced by uncertainty of the diagnosis (74%), fear of violence to the child (52%), fear of consequences from statutory agencies (46%), lack of knowledge of referral procedures (43%), fear of litigation (35%), fear of violence to the GDP (31%) and impact on the practice (6%).

Only 55% of Scottish GDP's have read the guidance "Child Protection and the Dental Team". Nearly a third (30%) of GDPs have received undergraduate training in child protection and over half (55%) have received postgraduate training in child protection. GDPs were less likely to have received undergraduate child protection training with increasing years since qualification. There are 15% of GDP's who have never received any form of child protection training or read "Child Protection and the Dental Team".

The majority of Scottish GDP's (73%) are willing to become involved in detecting neglect in their paediatric patients but only 1% currently sit on child protection committees.

Nearly half of Scottish GDP's would be concerned about a child if they had irregular attendance patterns (47%), returned in pain at repeated intervals (53%), failed to complete treatment (43%) or required repeat GA for extractions (37%).

Having had child protection training or reading "Child Protection and the Dental Team" increased the likelihood of GDP's to suspect and refer cases of child abuse or neglect.

## **7.2 Comprehensive Oral Examinations for children with welfare concerns**

Comprehensive oral assessment clinics have been successfully introduced and established as an integral part of comprehensive medical assessments for children with a welfare concern in Greater Glasgow and Clyde.

An assessment protocol and standardised paperwork for comprehensive oral assessments has been developed to enhance information sharing and patient access to appropriate care. This includes a “dental appendix” to the established comprehensive medical assessment report.

Children for whom a comprehensive oral assessment is completed range in age from 4 months to 16 years old. They all resided in areas with SIMD quintiles of 3 or less, with the majority living in SIMD 1 areas. The proportion of caries free children aged 9 and younger was 32% which is lower than the national average for 5 year olds. The mean number of decayed, missing and filled teeth for children aged 9 and younger was 2.52 which is higher than the local and national means. For those with evidence of caries experience the dmft was 3.7 which is slightly lower than the local and national means suggesting that more children in this age group have evidence of caries experience but may have on average slightly fewer teeth affected each. The proportion of children aged 10 and older who are caries free is far lower for the children receiving COAs (17%) than the national values for 12 year old children (62.6%). The mean DMFT of 5 for this group is also far higher than the national mean (0.89) and this is also true for those with evidence of caries experience (6 compared to 2.4). The proportion of children for whom a COA was completed and who have evidence of trauma or hypoplasia was broadly similar to the general population. There was evidence of tooth wear in 25% of children aged 9 years and younger and around 18% of those aged 10 years and older.

A care pathway for children with a welfare concern in Greater Glasgow and Clyde has been developed but still requires refinement especially when it comes to “closing the loop”.

## Chapter 8 Recommendations

From the results of this research some recommendations can be made as follows:

Child protection training should be included as part of the core subjects in the 5 year cycle of continuing professional development for dentists.

A letter should be sent to the GDC and copied to the Chief Dental Officers outlining the findings of this research, with the emphasis on the consideration of training in child protection becoming mandatory for all dental professionals.

Each general dental practice should develop their own practice protocol for cases where there are concerns about a child's welfare.

COAs undertaken by trained dentists should be an integral part of CMA's for children with welfare concerns.

The presence and purpose of COAs should be explained to general dental practitioners in Greater Glasgow and Clyde.

Other professionals from health services, social services and education need to be made aware of the type of information and input that paediatric dentistry can give in cases where there are welfare concerns about children.

The role of co-ordinator of COAs needs to be developed to ensure that it is always held by someone with extensive knowledge of both the role of dental practitioners in child protection as well as the child protection systems themselves, and to ensure that all the examining dentists undertaking COAs are adequately supported.

General Dental Practitioners should be supported by the co-ordinator for COAs when one of their patients is subject to a CMA.

Administrative support will be essential to ensure prompt completion of all admin tasks related to COAs as the clinics become busier.

Targeted prevention of dental caries should be available for all children referred for a CMA as they are at high risk of dental caries.

Continued efforts to improve pathways of care for dental treatment for this vulnerable group is essential as these families often have limited abilities to engage with dental services.

Follow up of these children needs to be improved through better working with colleagues in social work, health visiting and school nursing as well as those in the general and community dental services.

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## Chapter 10 Appendices

### 10.1 Appendix 1 Dental Practitioner Questionnaire 2005

INSTRUCTIONS: Please tick the appropriate box and/or write any additional information in the spaces provided. Thank you.

1. In which health board do you work?

Argyll & Clyde ☐

Ayrshire & Arran ☐

Border ☐

Dumfries and Galloway ☐

Fife ☐

Forth Valley ☐

Grampian ☐

Greater Glasgow ☐

Highland ☐

Lanarkshire ☐

Lothian ☐

Orkney ☐

Shetland ☐

Tayside ☐

Western Isle ☐

2. What is the name of your local council:

3. Your age band:

a. <30 ☐

b. 30-39 ☐

—

- c. 40-49 ☐
- d. >50 ☐
4. Gender:
- a. Male ☐
- b. Female ☐
5. Years qualified as a dentist:
- a. <10 ☐
- b. 10-19 ☐
- c. 20-29 ☐
- d. >30 ☐
6. Was Child Abuse/Protection part of your formal undergraduate dental lecture or seminar programme?
- a. Yes ☐
- b. No ☐
7. As a postgraduate have you attended any lectures or seminars on Child Abuse/Protection?
- a. Yes ☐
- b. No ☐
8. If Yes, was this a one off lecture/seminar or a half day or longer course?
- a. One off ☐
- b. Longer ☐
9. Have you ever suspected child abuse in one or more of your patients?
- a. Yes ☐
- b. No ☐
10. If Yes, on how many occasions during the last 5 years (insert number)?
11. Have you seen a case in which you suspected child physical abuse in the last six months?
- a. Yes ☐

- b. No ☐
12. Have you seen any definite cases of physical abuse in the last six months?
- a. Yes ☐
- b. No ☐
13. Have you ever made a Child Abuse/Protection referral to Social Services/Police/NSPCC?
- a. Yes ☐
- b. No ☐
14. If Yes, on how many occasions in the last five years (insert number)?
15. Have you ever suspected abuse but not referred the case to Social Services/Police/NSPCC?
- a. Yes ☐
- b. No ☐
16. If Yes, did you record your observations in your clinical records?
- a. Yes ☐
- b. No ☐
17. If you had a case of suspected child abuse, who would you refer to/ discuss with?
- a. Social Work ☐
- b. Police ☐
- c. Children First (NSPCC) ☐
- d. Paediatric Colleague ☐
- e. Other. Please specify:
18. Might any of the following factors affect your decision on whether to make a referral in a case of suspected child abuse?
- a. Concerns about impact on the practice (financial, time taken, loss of income, income withdrawal). Yes ☐ No ☐
- b. Fear of family violence to the child. Yes ☐ No ☐

- c. Fear of family violence to you. Yes ☐ No ☐
- d. Fear of litigation. Yes ☐ No ☐
- e. Fear of the consequences to the child from the intervention of statutory agencies. Yes ☐ No ☐
- f. Lack of knowledge regarding procedures for referral. Yes ☐ No ☐
- g. Lack of certainty about the diagnosis. Yes ☐ No ☐
- h. Other(s). Please specify;
19. Were you sent your local area child protection guidelines when you first started work at your practice? Yes ☐ No ☐
20. Have you seen your local area child protection guidelines? Yes ☐ No ☐
21. Do you know who is the lead clinician for child protection in your area? Yes ☐ No ☐
22. Have you ever seen any inter-agency training courses in your area? Yes ☐ No ☐
23. If you suspected abuse would you prefer to discuss your suspicions with a dental colleague before referring the case on to Social Services/ Police/NSPCC? Yes ☐ No ☐
24. Is there anyone else you would choose to consult before referring a suspected case of child abuse?  
If yes please specify: Yes ☐ No ☐
25. Do you think that general dental practitioners or members of the dental team are well placed to recognise behaviour and/or signs that may be attributable to child abuse? Yes ☐ No ☐
26. Do you think that general dental practitioners are, on the whole, adequately informed about issues of Child Abuse/Protection? (Including diagnosis, and knowledge of reporting protocols and procedures.) Yes ☐ No ☐
27. Do you want further training on how to identify physical abuse? Yes ☐ No ☐
28. Do you want further training on the mechanisms for reporting suspicions of possible physical abuse: (Courses, Workshops)?  
If yes, what is your preferred type:  
Lecture Courses  
Workshops  
Yes ☐ No ☐

29. Do you think that identification and reporting mechanisms of possible physical abuse should be part of vocational training courses? Yes ☐ No ☐
30. Using a scale of 0 to 10, to what extent are you willing to get involved in detecting physical abuse?
- 0 1 2 3 4 5 6 7 8 9 10  
Not Very Willing Willing
31. Do you sit on any Multi-agency Child Protection Committees? Yes ☐ No ☐  
If 'Yes' at what level (please tick one or more)
- Local area ☐
- National ☐
32. Are you interested in formulating guidelines for the role of Dental Practitioners in Child Protection? Yes ☐ No ☐

Please submit any other comments to aid this survey. Attach further pages if required.

**Thank you for your help.**

**Please return the questionnaire in the pre-paid envelope provided.**

## 10.2 Appendix 2 Dental Practitioner Questionnaire 2010

### DENTAL PRACTITIONER QUESTIONNAIRE

Please tick the appropriate box and/or write any additional information in the spaces provided. Thank you, your feedback is much appreciated.

**1. In which Health Board do you work?**

Ayrshire & Arran  
Dumfries & Galloway  
ForthValley  
Greater Glasgow & Clyde  
Lanarkshire  
Orkney  
Tayside

Borders  
Fife  
Grampian  
Highland  
Lothian  
Shetland  
Western Isles

**2. Could you please indicate your working arrangement:**

Independent NHS GDP

Salaried NHS GDP

**3. Years since BDS Qualification:**

Less than 2yrs  
10-<20

2-<5  
20 years or more

5-<10

**4. Gender:**

Male

Female

**5. Was Child Abuse/Protection part of your formal undergraduate dental lecture or seminar programme?**

Yes

No

**6. As a postgraduate have you attended any lectures or seminars on Child Abuse/Protection?**

Yes

No

**7. If Yes, was this a one off lecture /seminar or longer course?**

One off

Longer

**8. Have you ever suspected child abuse/neglect in one or more of your patients?**

Yes

No

**9. If Yes, on how many occasions during the last 5 years (insert**



number)?

**10. Have you seen a case in which you suspect child neglect in the last 6 months?**

Yes

No

**11. Have you seen any definite cases of neglect in the last 6 months?**

Yes

No

**12. Do you think that definite cases of neglect have a higher incidence of untreated dental decay?**

Yes

No

**13. Have you ever made a Child Abuse/Protection referral to a Child Protection Adviser/ Social Services/ Charity Organisation?**

Yes

No

**14. If Yes, on how many occasions during the last 5 years (insert number)?**

**15. Have you ever suspected abuse but not referred the case to a Child Protection Adviser/ Social Services / Charity organisation?**

Yes

No

**16. If Yes, did you record your observations in your clinical records?**

Yes

No

**17. If you had a case of suspected child abuse/neglect, who would you refer to/ discuss with?**

Child Protection Adviser  
Police  
Paediatric Colleague


Social Work  
Charity Organisation  
Other (please specify)


**18. Might any of the following factors affect your decision on whether to make a referral in a case of suspected child abuse/neglect?**

Concerns about impact on the practice (financial, time taken, loss of income, income withdrawal)

Yes

No

Fear of family violence to the child

Yes

No

Fear of family violence to you

Yes

No

Fear of litigation

Yes

No

Fear of consequences to the child from the intervention of statutory agencies	Yes	<input type="text"/>	No	<input type="text"/>
Lack of knowledge of referral procedures	Yes	<input type="text"/>	No	<input type="text"/>
Lack of certainty about the diagnosis	Yes	<input type="text"/>	No	<input type="text"/>
Other(s). Please specify;	Yes	<input type="text"/>	No	<input type="text"/>

**19. If you have pointed out a child's dental problems and offered appropriate and acceptable treatment did any of the following make you concerned about a child?**

Irregular attendance and repeated failed appointments	Yes	<input type="text"/>	No	<input type="text"/>
Failure to complete planned treatment	Yes	<input type="text"/>	No	<input type="text"/>
Returning in pain at repeated intervals	Yes	<input type="text"/>	No	<input type="text"/>
Requiring repeated GA for dental extractions	Yes	<input type="text"/>	No	<input type="text"/>

**20. If Yes to any of the above did you share your concerns with anyone? ( If yes please specify)**

Yes	<input type="text"/>	Specify: _____	No	<input type="text"/>
-----	----------------------	----------------	----	----------------------

**21. Were you sent your local area Child Protection Guidelines when you first started work at your practice?**

Yes	<input type="text"/>	No	<input type="text"/>
-----	----------------------	----	----------------------

**22. Have you seen "Child Protection and the Dental Team" manual 2006?**

Yes	<input type="text"/>	No	<input type="text"/>
-----	----------------------	----	----------------------

**23. Do you know who is the Child Protection Adviser is for your area?**

Yes	<input type="text"/>	No	<input type="text"/>
-----	----------------------	----	----------------------

**24. Have you ever seen / heard of any inter-agency training courses in your area?**

Yes	<input type="text"/>	No	<input type="text"/>
-----	----------------------	----	----------------------

**25. If you suspected child abuse / neglect would you prefer to discuss your suspicions with a dental colleague before referring the case on to a Child Protection Advisor/ Social Services/ Police/ Charity?**

Yes	<input type="text"/>	No	<input type="text"/>
-----	----------------------	----	----------------------

**26. Is there anyone else you would choose to consult before referring a suspected case of child abuse/ neglect? (If Yes please specify)**

Yes	<input type="text"/>	Specify: _____	No	<input type="text"/>
-----	----------------------	----------------	----	----------------------

**27. Do you think that general dental practitioners or members of the dental team are well placed to recognise behaviour/signs that may be attributable to child abuse/neglect?**

Yes ☐ No ☐

**28. Do you think that general dental practitioners are, on the whole, adequately informed about issues of Child Abuse/Protection? (Including diagnosis and reporting protocols/procedures)**

Yes ☐ No ☐

**29. Do you want further training on how to identify child neglect?**

Yes ☐ No ☐

**30. Do you want further training on the mechanisms for reporting suspicions of possible neglect?**

Yes ☐ No ☐

**31. Do you think that identification and reporting of possible neglect should be part of vocational training courses?**

Yes ☐ No ☐

**32. Please indicate whether you agree with the following statement- " I am willing to get involved in detecting neglect"**

<b>Strongly Agree</b>	<b>Agree</b>	<b>Neither</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**33. Do you sit on any Multi-agency Child Protection Committees?**

Yes ☐ No ☐

**34. If Yes, at what level? (Please tick one or more)**

Local ☐ National ☐

**Contact  
Details:**

**Christine Harris**

SpR in Paediatric Dentistry  
Department of Child Dental Health  
GlasgowDentalHospital and School  
378, Sauchiehall Street,  
Glasgow.G2 3JZ  
0141-211-9638  
christine.harris@ggc.scot.nhs.uk

**Alison Cairns**

Consultant in Paediatric Dentistry  
Department of Child Dental Health  
GlasgowDentalHospital and School  
378, Sauchiehall Street,  
Glasgow  
G2 3JZ  
a.cairns@dental.gla.ac.uk

Please add any comments overleaf. Thank you for your participation

## 10.3 Appendix 3 Covering Letter to General Dental Practitioners

Paediatric Dentistry Department  
Level 5,  
GlasgowDentalHospital and School  
378, Sauchiehall Street,  
Glasgow.  
G2 3JZ

Dear Colleague,

### **RE: The Role of the Dental Practitioner in Child Protection**

In 2006 a document entitled "Child protection and the dental team" was sent out to all general dental practitioners. This document outlines the dental teams' roles and responsibilities when it comes to protecting children. Child Protection training is now also included in the Section 63 courses available for continuing professional development. We are interested to see whether this has made any impact on general dental practitioners recognising and reporting abuse of the children they come into contact with.

In order to improve training and guidelines available to dentists we need to gather evidence of the current knowledge and understanding of general dental practitioners. This questionnaire is being sent out to 50% of the general dental practitioners currently registered in Scotland. We would greatly appreciate your help in making this study a success.

Please could you take the time to fill out the enclosed questionnaire and return it to us in the pre-paid envelope? All the results will be anonymous.

Thank you for your time.

Yours sincerely,

Christine Harris  
SpR in Paediatric Dentistry  
GlasgowDentalHospital& School  
378, Sauchiehall Street,  
Glasgow.  
G2 3JZ  
0141-211-9638  
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## 10.4 Appendix 4 Ethical Approval, R&D Approval

### WoSRES

#### West of Scotland Research Ethics Service

#### West of Scotland REC 2

Western Infirmary  
Ground floor, Tennent Institute  
38 Church Street  
Glasgow  
G11 6NT  
e-mail: evelyn.jackson@ggc.scot.nhs.uk  
Telephone: 0141-211-1722  
Facsimile: 0141-211-1847



31 May 2010

Miss Christine M Harris  
Dept of Paediatric Dentistry  
Glasgow Dental Hospital and School  
378, Sauchiehall Street  
Glasgow  
G2 3JZ

Dear Miss Harris

<b>REC reference number:</b>	<b>10/S0709/26</b>
<b>Protocol number:</b>	<b>1</b>
<b>Study Title:</b>	<b>Oral Disease in Vulnerable Children</b>

The Research Ethics Committee reviewed the above application at the meeting held on 18 May 2010. Thank you for attending to discuss the study.

#### Ethical Opinion

The Committee asked Ms Christine Harris and Professor R Welbury several questions relating to the study, which were answered satisfactorily, namely:

- Ms Harris explained that this is an observational study only as the children would be attending for dental appointment anyway. The Committee concluded therefore that the consenting process may be obstructive and unnecessary.

The members of the Committee present gave a favourable ethical opinion of the above research on the basis described in the application form, protocol and supporting documentation, subject to the conditions specified below.

#### Ethical Review of Research Sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

The Committee has not yet been notified of the outcome of any site-specific assessment (SSA) for the non-NHS research site(s) taking part in this study. The favourable opinion does not therefore apply to any non-NHS site at present. I will write to you again as soon as one Research Ethics Committee has notified the outcome of a SSA. In the meantime no study procedures should be initiated at non-NHS sites.

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## Conditions of the Favourable Opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

*For NHS research sites only, management permission for research ("R&D approval") should be obtained from the relevant care organisation(s) in accordance with NHS research governance arrangements. Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at <http://www.rdforum.nhs.uk>. Where the only involvement of the NHS organisation is as a Participant Identification Centre, management permission for research is not required but the R&D office should be notified of the study. Guidance should be sought from the R&D office where necessary.*

*Sponsors are not required to notify the Committee of approvals from host organisations.*

Other conditions specified by the REC:

- The Committee stated that there is no need to include a Participant Information Sheet or Consent Form as there is no need to consent the children onto this study.

**It is responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).**

**You should notify the REC in writing once all conditions have been met (except for site approvals from host organisations) and provide copies of any revised documentation with updated version numbers.**

## Approved Documents

The documents reviewed and approved at the meeting were:

Document	Version	Date
REC application	12/04/2010	-
Protocol	1	25 March 2010
Investigator CV	-	25 March 2010
Participant Information Sheet	4	25 March 2010
Participant Consent Form	4	25 March 2010
Letter from Statistician	-	30 March 2010
Summary/Synopsis	1	25 March 2010
Letter of support for Christine Harris	-	25 March 2010
Christine Harris' CV	-	25 March 2010

## Membership of the Committee

The members of the Ethics Committee who were present at the meeting are listed on the attached sheet.



### Statement of Compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

### After Ethical Review

Now that you have completed the application process please visit the National Research Ethics Service website > After Review

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

The attached document "After ethical review – guidance for researchers" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.


We would also like to inform you that we consult regularly with stakeholders to improve our service. If you would like to join our Reference Group please email [referencegroup@nres.npsa.nhs.uk](mailto:referencegroup@nres.npsa.nhs.uk).

**10/S0709/26**

**Please quote this number on all correspondence**

With the Committee's best wishes for the success of this project.

Yours sincerely



*for* **Dr S Langridge**  
**Chair**

Enclosures: List of names and professions of members who were present at the meeting and those who submitted written comments  
"After ethical review – guidance for researchers"

Copy to: Professor R Welbury, Glasgow Dental Hospital and School  
Michael Barber, R&D Office, Tennent Institute, Western Infirmary

## West of Scotland REC 2

### Attendance at Committee meeting on 18 May 2010

#### Committee Members:

<i>Name</i>	<i>Profession</i>	<i>Present</i>	<i>Notes</i>
Dr A Crichton	Oral Medicine	Yes	
Rev R Currie	Clergy (Retired)	Yes	
Mrs Caitriona Donald	Senior Charge Nurse	Yes	
Dr Anja Guttinger	Consultant in Sexual and Reproductive Health	Yes	
Mrs Mary Keenaghan	Independent Auditor	Yes	
Dr S Langridge	General Practitioner	Yes	
Mr Steve McGlynn	Lead Pharmacist	Yes	
Mr J McHugh	Insurance	Yes	
Prof C Robertson	Statistician	No	
Dr David Shaw	Lecturer in Ethics & Law	Yes	
Mr James Timmons	Retired IT Manager	Yes	
Dr Andy Wills	Social Worker	Yes	

#### Also in attendance:

<i>Name</i>	<i>Position (or reason for attending)</i>
Ms Evelyn Jackson	Committee Co-ordinator
Dr Judith Godden	Scientific Adviser/Manager
Mrs Liz Jamieson	Committee Co-ordinator

#### Written comments received from:

<i>Name</i>	<i>Position</i>
Prof C Robertson	Statistician



## Research and Development Approval

Research & Development  
R&D Management Office  
1<sup>st</sup> Floor, Tennent Institute  
Western Infirmary  
GLASGOW G11 6NT



Our Ref: MB/LR  
Enquiries to: Dr Michael Barber  
Direct Line: 0141 211 8548  
e-mail: [Michael.Barber@ggc.scot.nhs.uk](mailto:Michael.Barber@ggc.scot.nhs.uk)

13<sup>th</sup> July 2010

Miss Christine Harris,  
Department of Paediatric Dentistry,  
Glasgow Dental Hospital and School,  
378 Sauchiehall Street,  
Glasgow G2 3JZ

### R&D Management Approval

Dear Miss Harris,

**R&D Reference:** GN10DN144  
**Chief Investigator:** Professor Richard Welbury  
**Project Title:** Oral Disease in Vulnerable Children  
**Protocol Ref:** dated 25/03/10

I am pleased to confirm that Greater Glasgow & Clyde Health Board is now able to grant **Management Approval** for the above study.  
As a condition of this approval the following information is required during the lifespan of the project:

1. SAES/SUSARS – If the study is a **Clinical Trial** as defined by the Medicines for Human Use Clinical Trial Regulations, 2004 (CTIMP only)
2. Recruitment Numbers on a quarterly basis (not required for commercial trials)
3. Any change of Staff working on the project named on the ethics form
4. Change of CI
5. Amendments – Protocol/CRF etc
6. Notification of when the Trial / study has ended
7. Final Report
8. Copies of Publications & Abstracts

**Please add this approval to your study file as this letter may be subject to audit and monitoring.**

Yours sincerely,

Dr Michael Barber  
Research Co-ordinator

CC: Professor R Welbury, Glasgow Dental Hospital and School

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## 10.5 Appendix 5 Comprehensive Medical Assessment Paperwork

Comprehensive Medical Assessment						Edition: Jan 07
<div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">+</div>           Of a child where there are welfare concerns         </div>						
Child's Surname			Forename(s)			
Known As		DOB		Sex:		
Address				CHI No		
				Postcode:		
Siblings		DOB				
		DOB				
		DOB				
GP			Referrer			
Address			Address			
			Designation:			
School/Nursery Attended:			School Nurse / HV:			
Date of examination		Time of Examination		Emergency <input type="checkbox"/> Planned <input type="checkbox"/>		
Location of Examination:						
Paediatric Ward		<input type="checkbox"/>		Specialist CP Unit <input type="checkbox"/>		
GP Surgery		<input type="checkbox"/>		Police Medical Suite <input type="checkbox"/>		
Community Paediatric Clinic		<input type="checkbox"/>		Other (specify) <input type="checkbox"/>		
Person Accompanying Child						
Mother in attendance? Yes <input type="checkbox"/> No <input type="checkbox"/> Father in Attendance? Yes <input type="checkbox"/> No <input type="checkbox"/>						
<b>Consent to Health Assessment and Information Sharing</b> (source i.e. parent, young person, person holding parental rights) Parent's signature: _____						
		Name		Relationship		
		Date				
Witnessed By:		Name		Position		
		Date				
Referrer's concern : CSA <input type="checkbox"/> / Physical Injury <input type="checkbox"/> / Emotional abuse <input type="checkbox"/> / Physical Neglect <input type="checkbox"/> / NOFTT <input type="checkbox"/>						

Name: [REDACTED]	Date of birth: [REDACTED]
Account of Circumstances leading to referral	
(a) From Referrer	
Name: [REDACTED]	Position: [REDACTED]
[REDACTED]	
(b) From accompanying adult	
Name: [REDACTED]	Position: [REDACTED]
[REDACTED]	
(c) From Child:	
[REDACTED]	
<b>Background Information already available from notes</b> (e.g. previous concerns re developmental delay, poor growth, possible episodes of NAI) [REDACTED]	

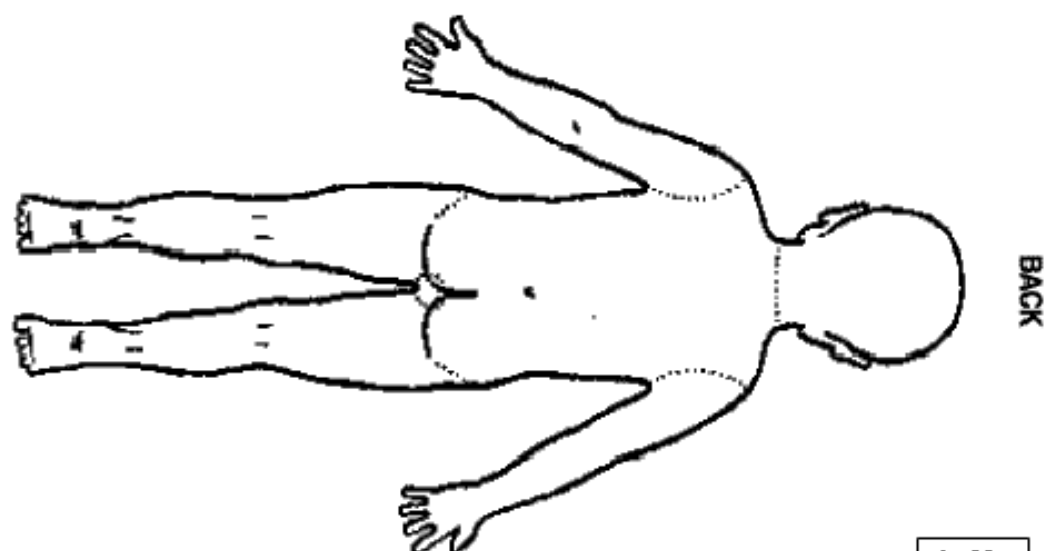
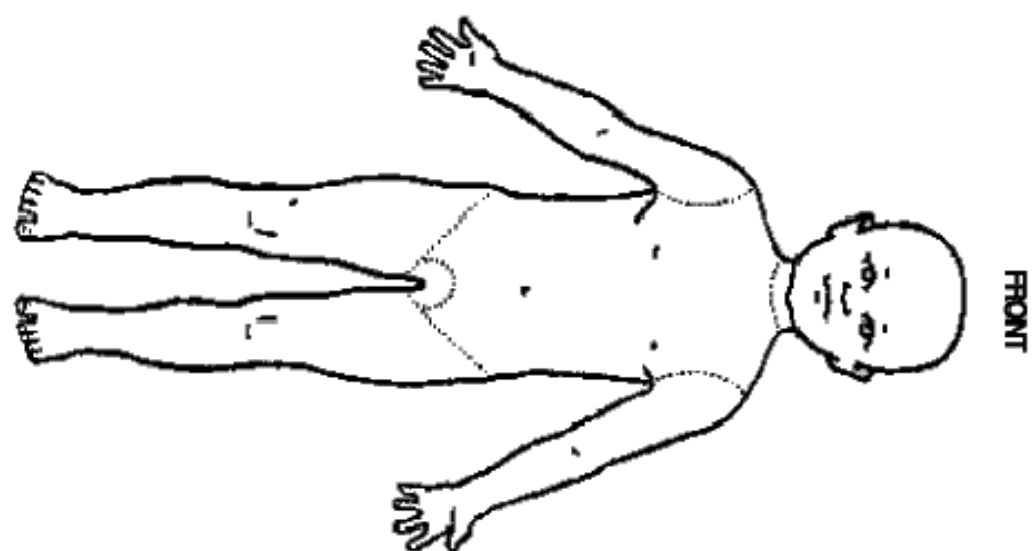


Name: <input style="width: 100px;" type="text"/>		Date of birth: <input style="width: 100px;" type="text"/>	
<b>Concerns Raised by Child/Parent/Carer/Social Worker</b>			
(Tick box if problem raised and discussed)			
Illness <input type="checkbox"/>	<input type="checkbox"/>	Vision <input type="checkbox"/>	<input type="checkbox"/>
Diet/Feeding <input type="checkbox"/>	<input type="checkbox"/>	Child substance abuse <input type="checkbox"/>	<input type="checkbox"/>
Energy <input type="checkbox"/>	<input type="checkbox"/>	Carer's Mental Health <input type="checkbox"/>	<input type="checkbox"/>
Emotional Health <input type="checkbox"/>	<input type="checkbox"/>	Carer substance abuse <input type="checkbox"/>	<input type="checkbox"/>
Other (specify) <input style="width: 100px;" type="text"/>		<input style="width: 100px;" type="text"/>	
Comments: <input style="width: 100%; height: 40px;" type="text"/>			
<b>Birth Details</b>			
Antenatal Problems: E.g. Maternal drug/alcohol misuse, pregnancy induced hypertension, limited/no antenatal care. <input style="width: 100%; height: 20px;" type="text"/>			
Hospital/Place of Birth: <input style="width: 100px;" type="text"/>			
Birth Weight: <input style="width: 100px;" type="text"/>		Neonatal Hearing Test: YES <input type="checkbox"/> / NO <input type="checkbox"/>	
Gestation: <input style="width: 100px;" type="text"/>		PASS <input type="checkbox"/> / FAIL <input type="checkbox"/>	
Type of Delivery: <input style="width: 100px;" type="text"/>		Guthrie: YES <input type="checkbox"/> / NO <input type="checkbox"/>	
<b>Any Neonatal Problems:</b> (Give brief description e.g. SCBU, Jaundice, drug withdrawal etc) <input style="width: 100%; height: 30px;" type="text"/>			
<b>Family History</b>			
Include any Significant Family History <input style="width: 100%; height: 150px;" type="text"/>			

Name: <span style="border: 1px solid black; display: inline-block; width: 100px; height: 1.2em; vertical-align: middle;"></span>		Date of Birth <span style="border: 1px solid black; display: inline-block; width: 100px; height: 1.2em; vertical-align: middle;"></span>		
<b>Significant Health Problems</b>				
Include allergies, current medication if known, details of any pharmacy equipment required by the child e.g. nasogastric tubes, catheters.  <div style="border: 1px solid black; height: 100px; width: 100%;"></div>				
<b>Hospital Admissions/A&amp;E Attendances/Appointments</b>				
Give details if known  <div style="border: 1px solid black; height: 100px; width: 100%;"></div>				
<b>Child Health Surveillance</b>				
	Yes	No	Comments	
6-8 weeks	<input type="checkbox"/>	<input type="checkbox"/>	<div style="border: 1px solid black; height: 1.2em; width: 100%;"></div>	
13 months	<input type="checkbox"/>	<input type="checkbox"/>	<div style="border: 1px solid black; height: 1.2em; width: 100%;"></div>	
2 years	<input type="checkbox"/>	<input type="checkbox"/>	<div style="border: 1px solid black; height: 1.2em; width: 100%;"></div>	
3 – 5 years	<input type="checkbox"/>	<input type="checkbox"/>	<div style="border: 1px solid black; height: 1.2em; width: 100%;"></div>	
School Entry	<input type="checkbox"/>	<input type="checkbox"/>	<div style="border: 1px solid black; height: 1.2em; width: 100%;"></div>	
Unscheduled	<input type="checkbox"/>	<input type="checkbox"/>	<div style="border: 1px solid black; height: 1.2em; width: 100%;"></div>	
Comments: <div style="border: 1px solid black; height: 30px; width: 100%;"></div>				
<b>Immunisations</b>				
Vaccine	Age Due	Yes	Date	No
DTaP/IPV/Hib	Two months	<input type="checkbox"/>	<div style="border: 1px solid black; height: 1.2em; width: 100%;"></div>	<input type="checkbox"/>
PCV	Two months	<input type="checkbox"/>	<div style="border: 1px solid black; height: 1.2em; width: 100%;"></div>	<input type="checkbox"/>
DTaP/IPV/Hib	Three months	<input type="checkbox"/>	<div style="border: 1px solid black; height: 1.2em; width: 100%;"></div>	<input type="checkbox"/>
MenC	Three months	<input type="checkbox"/>	<div style="border: 1px solid black; height: 1.2em; width: 100%;"></div>	<input type="checkbox"/>
DTaP/IPV/Hib	Four months	<input type="checkbox"/>	<div style="border: 1px solid black; height: 1.2em; width: 100%;"></div>	<input type="checkbox"/>
MenC	Four months	<input type="checkbox"/>	<div style="border: 1px solid black; height: 1.2em; width: 100%;"></div>	<input type="checkbox"/>
PCV	Four months	<input type="checkbox"/>	<div style="border: 1px solid black; height: 1.2em; width: 100%;"></div>	<input type="checkbox"/>
Hib / MenC	12 months	<input type="checkbox"/>	<div style="border: 1px solid black; height: 1.2em; width: 100%;"></div>	<input type="checkbox"/>
MMR	13 months	<input type="checkbox"/>	<div style="border: 1px solid black; height: 1.2em; width: 100%;"></div>	<input type="checkbox"/>
PVC	13 months	<input type="checkbox"/>	<div style="border: 1px solid black; height: 1.2em; width: 100%;"></div>	<input type="checkbox"/>
DTaP/IPV	3 – 5 years	<input type="checkbox"/>	<div style="border: 1px solid black; height: 1.2em; width: 100%;"></div>	<input type="checkbox"/>
MMR	3 – 5 years	<input type="checkbox"/>	<div style="border: 1px solid black; height: 1.2em; width: 100%;"></div>	<input type="checkbox"/>
Td/IPV	13 – 18 years	<input type="checkbox"/>	<div style="border: 1px solid black; height: 1.2em; width: 100%;"></div>	<input type="checkbox"/>
Other:				



Name: <input type="text"/>		Date of Birth <input type="text"/>	
<b>Clinical Examination</b>			
General physical appearance of child (note especially any evidence of infection, neglect or injury) <input type="text"/>			
Demeanour/behaviour/impression of developmental/maturation status and emotional health <input type="text"/>			
Measurements			
	Weight <input type="text"/>	kg	<input type="text"/> centile
	Height <input type="text"/>	cm	<input type="text"/> centile
	Head circumference <input type="text"/>	cm	<input type="text"/> centile
Findings on external physical examination			
		Comment	
Skin and hair		<input type="text"/>	
Teeth		<input type="text"/>	
Eyes		<input type="text"/>	
Ears, nose and throat		<input type="text"/>	
Cardiovascular system		<input type="text"/>	
Blood pressure (if applicable)		<input type="text"/>	
Respiratory system		<input type="text"/>	
Alimentary system		<input type="text"/>	
Genitalia/testes		<input type="text"/>	
Nervous system		<input type="text"/>	
Locomotion/posture		<input type="text"/>	
a) Visual acuity	R	<input type="text"/>	
	L	<input type="text"/>	
b) Hearing	R	<input type="text"/>	
	L	<input type="text"/>	

Name: Date of Birth 

Please indicate on the charts any areas of bruising or abrasions

Name: <input type="text"/>		Date of Birth <input type="text"/>	
<b>Involvement with Other Health Professionals</b>			
	<b>Name</b>	<b>Base</b>	<b>Next Appt (if known)</b>
Paediatrician	<input type="text"/>	<input type="text"/>	<input type="text"/>
S & L Therapy	<input type="text"/>	<input type="text"/>	<input type="text"/>
Occ. Therapy	<input type="text"/>	<input type="text"/>	<input type="text"/>
Physiotherapy	<input type="text"/>	<input type="text"/>	<input type="text"/>
<u>CAMHs</u>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other e.g. eyes, dietician, ENT.	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>CONCLUSION/OPINION</b> <input type="text"/>			



Name: <input type="text"/>		Date of Birth <input type="text"/>	
Summary of Findings (Please report on each item)	Mild (M) Moderate (Mod) Severe (S)	Newly identified at this assessment (tick)	Currently under treatment (tick)
Developmental delay / learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motor difficulties	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speech difficulties	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visual difficulties	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hearing difficulties	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Missed Immunisations (tick if yes)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asthma / Allergies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Epilepsy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Growth Faltering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Obesity / Overweight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tooth Decay	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mental Health Concerns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Substance Misuse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enuresis / Encopresis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sexual Health Concerns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>ACTION BY THE UNDERSIGNED CLINICIAN</b>			
<b>1. Further investigation of possible abuse requiring:</b>			
Joint Paediatric/Forensic Examination	<input type="checkbox"/>	Specialist Paediatric Examination	<input type="checkbox"/>
<b>2. Need for further assessment/treatment of medical/developmental problems. Refer child to:</b>			
Child Development centre	<input type="checkbox"/>	GP	<input type="checkbox"/>
Community Paediatrician	<input type="checkbox"/>	Ophthalmology	<input type="checkbox"/>
Audiology	<input type="checkbox"/>	Dietician	<input type="checkbox"/>
ENT	<input type="checkbox"/>	Sexual health	<input type="checkbox"/>
Speech Therapy	<input type="checkbox"/>	OT	<input type="checkbox"/>
CAMHS	<input type="checkbox"/>	Physio	<input type="checkbox"/>
<b>3. Other Action Required:</b>			
Refer to SWD	<input type="checkbox"/>	Refer to Reporter	<input type="checkbox"/>
		Refer to Special Needs System	<input type="checkbox"/>
Signed <input type="text"/>	Date <input type="text"/>	Time <input type="text"/>	<input type="text"/>
Name in Block Letters	Designation	Review <input type="text"/> Weeks	
<b>Copy this assessment to:</b>			
File <input type="checkbox"/>	Police <input type="checkbox"/>	School Nurse <input type="checkbox"/>	
Parents <input type="checkbox"/>	GP <input type="checkbox"/>	Audit Office <input type="checkbox"/>	
Social <input type="checkbox"/>	HV <input type="checkbox"/>	Other <input type="checkbox"/>	
Work <input type="checkbox"/>	Paediatrician <input type="checkbox"/>	(Please state) <input type="text"/>	
<b>A COPY OF THE FRONT AND BACK PAGE OF THIS FORM SHOULD BE SENT TO: _____ AT _____ FOR AUDIT PURPOSES</b>			

## 10.6 Appendix 6 Comprehensive Oral Assessment Paperwork

### Comprehensive Oral Assessment

Of a child where there are welfare concerns

<b>Child's Surname</b> [Redacted]		<b>Forename(s)</b> [Redacted]	
<b>Known As</b> [Redacted]		<b>DOB</b> [Redacted]	<b>Sex:</b> [Redacted]
<b>Address</b> [Redacted]		<b>CHI No</b> [Redacted]	
		<b>Postcode:</b> [Redacted]	
<b>Siblings</b>	[Redacted]	<b>DOB</b>	[Redacted]
	[Redacted]	<b>DOB</b>	[Redacted]
	[Redacted]	<b>DOB</b>	[Redacted]
<b>GDP</b> [Redacted]		<b>Date of Examination:</b>	
<b>Address</b> [Redacted]		<b>Time of examination:</b>	
<b>Location of Examination:</b>		<b>Emergency</b>	<input type="checkbox"/>
		<b>Planned</b>	<input type="checkbox"/>
<b>Person Accompanying Child</b> [Redacted]			
<b>Consent to Health Assessment and Information Sharing</b> (source i.e. parent, young person, person holding parental rights) Parent's signature: _____			
	[Redacted]	[Redacted]	[Redacted]
	<b>Name</b>	<b>Relationship</b>	<b>Date</b>
<b>Witnessed By:</b>	[Redacted]	[Redacted]	[Redacted]
	<b>Name</b>	<b>Position</b>	<b>Date</b>
<b>Referrer's concern :</b> CSA <input type="checkbox"/> / Physical Injury <input type="checkbox"/> / Emotional abuse <input type="checkbox"/> / Physical Neglect <input type="checkbox"/> / NOFTT <input type="checkbox"/>			



Name: <span style="background-color: #cccccc; display: inline-block; width: 40px; height: 15px;"></span>	Date of Birth <span style="background-color: #cccccc; display: inline-block; width: 40px; height: 15px;"></span>																												
<b>Oral Clinical Examination</b>																													
<p>Extra-oral:</p> <p>TMJ</p> <p><u>Lymphadenopathy</u>: Y/N</p> <p>Symmetry</p>																													
<p>Intra-Oral:</p> <p>Soft Tissues:</p> <p>Lips</p> <p>Cheeks</p> <p>Tongue</p> <p>Floor of mouth</p> <p>Oral Hygiene:</p> <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> </table> <p>BPE:</p> <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> </table> <p>Teeth present:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 50%; height: 20px;"></td><td style="width: 50%; height: 20px;"></td></tr> <tr><td style="width: 50%; height: 20px;"></td><td style="width: 50%; height: 20px;"></td></tr> </table> <p>Caries Present:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 50%; height: 20px;"></td><td style="width: 50%; height: 20px;"></td></tr> <tr><td style="width: 50%; height: 20px;"></td><td style="width: 50%; height: 20px;"></td></tr> </table> <p>Restorations:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 50%; height: 20px;"></td><td style="width: 50%; height: 20px;"></td></tr> <tr><td style="width: 50%; height: 20px;"></td><td style="width: 50%; height: 20px;"></td></tr> </table> <p>Tooth Wear:</p> <p><u>Hypoplasia / Hypomineralisation</u>:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 50%; height: 20px;"></td><td style="width: 50%; height: 20px;"></td></tr> <tr><td style="width: 50%; height: 20px;"></td><td style="width: 50%; height: 20px;"></td></tr> </table> <p>Miscellaneous:</p>																													

## CONCLUSION/OPINION

Name: <input type="text"/>		Date of Birth <input type="text"/>	
Summary of Findings (Please report on each item)	Yes(Y) or No (N)	Newly identified at this assessment (tick)	Currently under treatment (tick)
Untreated Tooth Decay	<input type="text"/>	<input type="text"/>	<input type="text"/>
Oral Sepsis/ Infection	<input type="text"/>	<input type="text"/>	<input type="text"/>
Tooth Wear	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other (specify)	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>ACTION BY THE UNDERSIGNED CLINICIAN</b>			
<b>1. Need for further assessment/treatment of dental problems. Refer child to:</b>			
Community Dentist	<input type="text"/>	Hospital Dental dept	<input type="text"/>
GDP	<input type="text"/>		
Signed	<input type="text"/>	Date	<input type="text"/>
	<input type="text"/>	Time	<input type="text"/>
Name in Block Letters	Designation	Review <input type="text"/> Weeks	
<b>Copy this assessment to:</b>			
File <input type="text"/>	Police <input type="text"/>	School Nurse	<input type="text"/>
Parents <input type="text"/>	GP <input type="text"/>	Audit Office	<input type="text"/>
Social <input type="text"/>	HV <input type="text"/>	Other	<input type="text"/>
Work <input type="text"/>	Paediatrician <input type="text"/>	(Please state)	<input type="text"/>

## 10.7 Appendix 7 Dental Appendix to Comprehensive Medical Assessment

Name:	Date of birth:	Date of assessment:
<b>DENTAL APPENDIX TO COMPREHENSIVE MEDICAL ASSESSMENT</b> FOR A CHILD WHERE THERE IS A WELFARE CONCERN (to be completed by a qualified dentist)		
Concerns raised		
This child currently : <ul style="list-style-type: none"> <li>Is registered/ unregistered with a dentist</li> <li>Attends regularly /irregularly/ only when in pain</li> </ul> The last reported dental visit was..... This child brushes ..... times per day with ..... ppm fluoride toothpaste which is appropriate/inappropriate for their age.		
<u>CONCLUSION/OPINION</u> (delete as required)  This child is in the ..... dentition.  They have untreated decay in ..... primary teeth and ..... permanent teeth.  There is/is no evidence of current oral sepsis  Oral cleanliness is .....  They are at low/medium/high risk of developing dental decay.  They have erosion affecting ..... primary teeth and ..... permanent teeth, which is mild/ moderate/ severe.  It is/ is not likely that this child will have suffered considerable pain.		
<u>CARE PLAN</u> This child requires: <ol style="list-style-type: none"> <li>Full preventive dental plan including toothbrushing instruction, diet and oral hygiene advice, use of fluoride mouthwash/fluoride supplements, applications of fluoride varnish ..... times per year, fissure sealants on non-decayed back teeth and dental radiographs every ..... months.</li> <li>Further dental examination including radiographic examination</li> <li>Treatment/ urgent treatment of oral disease including restorations and/or extractions which may require local anaesthetic/general anaesthetic</li> </ol>		
<u>TARGETS</u> The following targets have been agreed with ..... <ul style="list-style-type: none"> <li>Teeth have to be brushed twice per day with fluoride toothpaste.</li> <li>..... has to be taken regularly to the dentist (this means every 3-6 months) for check ups as well as any treatment required.</li> <li>Advice from dental staff regarding diet and oral hygiene will be listened to and taken on board.</li> </ul> It has been agreed that appointments will be made at ..... for dental treatment. Further preventive treatment will be at .....  Reasonably attainable targets have been set. Failure to comply with these measures will result in ..... experiencing considerable pain and suffering.		
<u>SIGNATURES</u>  .....(signature) .....(Name) .....(Position) .....(Date)		

## 10.8 Appendix 8 COA Training Pack

### Comprehensive Oral Assessment Training Pack

Please score the following  
photos as if they were patients  
on the example grid sheets  
provided.  
If you cannot see a surface  
code it as 9 (excluded)

Example 1



Example 2  
(do not include incisors)



Example 3



Example 4



Example 5

Example 6  
(hypodontia)

Example 7



Example 8

Example 9  
(Ignore 6s, previous trauma)Example 10  
(previous trauma)



## **10.9 Appendix 9 Roles and Responsibilities of Co-ordinator for Comprehensive Oral Assessments (COAs) for Children with Identified welfare Concerns.**

### **Administrative**

- Receiving early sharing information for all CMAs ( this is approximately at least 1 email per day)
- Ensuring COAs are completed by most appropriate dentist in most appropriate location (majority can be done in community settings where comprehensive medical assessments take place, however sometimes children require specialist care due to complex medical history etc and require specialist paediatric dental knowledge)
- Liaising with: Child Protection Unit, Paediatricians, CMA administrative staff, social workers, general dental practitioners/ community dental officers
- Writing letters to the above mentioned groups as well as health visitors, school nurses
- Attending meetings with administrators, paediatricians and others involved in the comprehensive medical assessments
- Disseminating information to all dentists involved in COAs
- Ensuring paperwork is up to date and changed according to best practice guidance
- Disseminating paperwork to all dental staff involved in CMAs
- Requesting and reviewing Glasgow Dental Hospital notes for children who have either had paediatric dental DNAs or are/have been patients at Glasgow Dental Hospital (recently at least 1 family a week- ranging from 1-3 children per family). This takes approximately an hour worth of admin time every week, depending on how busy medical records are.
- Telephoning, emailing and writing to general dental practitioners to request background dental reports for children. This may involve prior access to dental notes as dentist details are still not routinely requested by social workers.
- Performing internet searches to identify dentists' details in order to contact them as above.

### **Clinical**

- Answering clinical questions and queries from families, lawyers, paediatricians, GMPs, GPs etc regarding paediatric dental issues
- Provide specialist leadership in the provision of paediatric dental services for children with a welfare concern
- Conducting Comprehensive oral assessments when other dental members of the team are unavailable. This involves travelling from main base as the ones that cannot be staffed by other dentists usually occur in Southbank Centre when there are no dental facilities available or are at other centres due to staff leave.

### **Training**

- Arranging regular child protection training for dental staff involved in COAs

- Arranging access to multi-agency child protection training for COA dental staff in specific areas not normally required for dentists- eg court skills
- Arranging training and calibration for new staff involved in COAs

#### Support

- Supporting new staff to COAs
- Providing support for COA staff if any upsetting/ difficult issues arise
- Providing specialist knowledge of child protection/ child abuse/ neglect
- Providing information and support if COA staff are called as witnesses in case conferences or court proceedings

#### Follow-up

- Ensuring assessment and audit forms are properly completed and returned
- Follow-up of children referred to specialist paediatric dental services
- Liaising with general dental practitioners regarding whether patients attend scheduled appointments or require referral to Glasgow Dental Hospital

#### Audit

- Audit COA clinics
- Assessment of Audit including detailed and exhaustive methodology applied, resulting in conclusions with significant importance clinically and nationally as required by specialist paediatric training
- Planning for future direction of Audit
- Ensure insights are disseminated locally, nationally and internationally
- Contribute appropriately to the development and implementation of relevant Health Education and Promotion programmes using expertise from COAs

#### Knowledge required

- Signs, symptoms and presentations suggestive of child abuse and neglect
- The oro-facial signs of child abuse
- The principles and processes of child protection and managing child maltreatment
- Government guidance related to safeguarding and promoting children's welfare.

This requires at least 1 session of 3 hours duration a week to ensure all roles and responsibilities are completed to the highest of standards as the children subject to COAs are some of the most vulnerable and difficult to reach in the whole of society.

## 10.10 Appendix 10 Child Protection Scenarios

### Scenario 1

A new family have registered their child with your practice. The mother has brought her daughter Claire to see you for an examination. Claire is 10 years old and a very pleasant chatty girl. She lives at home with her mum. You perform the examination and notice that Claire has occlusal caries in her first permanent molars, but is otherwise caries free.

You have noticed that mum has not said anything while you have been examining Claire and when you begin to explain your findings to Claire's mum you notice that mum appears drowsy and is slightly slurring her words and almost seems to fall asleep when you return your attention to Claire.

Claire seems embarrassed about her mum's behaviour. She otherwise appears to be a well looked after girl and very sensible for her age. The appointment is coming to an end.

What will you do?

### Scenario 2

Mr Smith has brought his 2 older children to see you for their 6 monthly check-up. Lisa is 9 and Steven is 5 years old. Also with the family is the new baby who is 6 months old. The 2 older children co-operate very well for an examination and you also ask if they wish the baby to be registered with the practice to which dad agrees. You examine the baby as you have an extra 5 minutes.

None of the children have any current complaints but dad tells you that Lisa was "screaming the place down" a month ago and was upsetting the baby, "naebuddy could get any sleep cause she was making a pure racket". Lisa has extensive caries in all her primary molars and has a draining abscess buccal to her lower 2<sup>nd</sup> primary molar. Her oral hygiene is poor and she also has stained fissures in her first permanent molars.

On examination Steven has obvious caries in his first primary molars. His oral hygiene is inadequate. The baby has lower central primary incisors only and the mouth appears clean.

You notice that the 2 older children smell a bit and their school shirts are visibly dirty. The baby is immaculately dressed and appears very happy.

Outline your treatment plan

The family fail to attend the appointments you arrange. What do you do? What are your concerns if any?

4 months later, on a Monday morning, Mr Smith returns with Lisa. Lisa now has a swollen face on her right hand side and it is closing her eye. The family did not return to your practice since the last visit.

Lisa again co-operates very well and her dentition is as before but the caries has progressed and the facial swelling is related to her upper right first primary molar. Her father asks "can you no just gie her the jag and rip the bugger out?" You explain that local anaesthetic will not work well in an infected field so you are unlikely to get the tooth numb but Lisa allows you to excavate the caries

with a hand excavator and pus flows from the tooth. You prescribe antibiotics and arrange to see Lisa on Friday to ensure the swelling is resolving and to possibly extract this tooth. The family fail to attend.  
What do you do?

### **Scenario 3**

You are working at the emergency dental service and a 3 year old child is brought in to see you. He has rampant caries with pus draining from both lower 2<sup>nd</sup> primary molars. He is distressed but looks a bit limp as he clings to his mother. Mum tells you he has had nothing at all to eat or drink for 3 days. The child looks obviously dehydrated. You take his temperature which is 39°C in his right ear and he feels hot and dry to touch. Mum says he is not registered with a dentist, but when you check R4 you realise he had been to see a community dentist 9 months ago who referred the child for extraction of 20 teeth. The family has not been in contact with dental services since then.  
What do you do?

If the child had never been seen by dental services would you have done anything differently?

### **Scenario 4**

An anxious 13 year old has been very keen for “braces”. She is very shy and doesn’t talk a lot. Her oral hygiene is not great but she is trying hard. She always attends with her mother. At this visit you are reinforcing oral hygiene when the patient’s mother gets a call on her mobile. Mum leaves the room and as soon as your surgery door is shut your patient says, “I’m getting bullied really badly at school”.  
What do you do?

Just as soon as the patient has told you her mum returns to the surgery and the patient clamms up and will barely even make eye contact with you for the rest of the appointment and won’t engage in conversation.

What do you do?

## Chapter 11 Published Abstracts

International Association of Paediatric Dentistry- Presented at International Congress, Athens 2011

### THE SCOTTISH DENTAL PRACTITIONER AND THEIR ROLE IN CHILD ABUSE AND NEGLECT

**Christine M Harris<sup>1</sup>**, Richard Welbury<sup>1</sup>, Alison Cairns<sup>1</sup>

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Background: Previous work by Cairns et al in 2005 showed that although 29% of dentists in Scotland had suspected child abuse only 8% had referred these cases on to the appropriate authorities. The phenomenon of under-reporting is an international problem.

Aim: To assess current knowledge of dentists in Scotland with regards to child abuse and neglect: whether the uptake and impact of child protection training had increased among GDPs; the willingness of GDPs to get involved in detecting neglect.

Design: A questionnaire was sent out to 50% of the GDP's in Scotland (N=1215).

Results: Response rate was 52%( 53% male). 30% and 55% of respondents had received undergraduate or postgraduate training in child protection respectively. 38% had suspected child abuse/neglect in one or more of their paediatric patients but only 11% had referred a case. The most common factor that affected the decision to refer was "lack of certainty of the diagnosis" (79%). 77% thought that children who were abused/neglected had more dental decay and 76% of dentists were willing to get involved in detecting neglect.

Conclusions: Dentists in Scotland are suspecting and referring more cases of child abuse/neglect than in 2005 although barriers to referral still exist. Most dentists believe that children who have been abused or neglected will have more dental decay. 76% are willing to get involved in detecting neglect.

British Society of Paediatric Dentistry- Presented at National Conference, Glasgow Sept 2011.

Establishing comprehensive oral assessments for children with “welfare concerns”

Harris CM, Welbury RR, Cairns AM: Department of Paediatric Dentistry, Glasgow Dental Hospital and School.

Background: Our local Child Protection Unit established comprehensive medical assessments (CMAs) for children with “welfare concerns”. CMAs involve a physical examination and a detailed history and account of circumstances leading to referral. CMAs cannot be comprehensive unless oral examination is performed by a dentist.

Aim: To establish regular input from paediatric dentistry to CMA examinations and quantify the oral health of children “with a welfare concern”.

Method: Dental examination was in accord with BASCD criteria and dental findings were included in the medical report. Age, dmft/ DMFT, postcode and registration with dental services were recorded on paper then transcribed to a secure Excel database.

Results: All CMA’s now have input from paediatric dentists and are conducted in community settings with dental facilities. Forty-one children were examined with an age range of 8 months-15 years old (mean 6 years). 63% had obvious decay experience. For children with caries their dmft was 5.38 and DMFT was 7.9. Scottish Index of Multiple Deprivation scores (SIMD) were 1 or 2 for all children (1=most deprived, 5=least deprived). 63% claimed registration with dental services. Only 22% had evidence of restorations or extractions.

Conclusion: Dental examination was important for accurate assessment of overall health. dmft/DMFT was higher than the national averages for 5 and 12 year olds (which is 4.19 and 2.41 respectively). All children came from the most

deprived areas. Involvement of the paediatric community dental service and support from NHS management has ensured that this service will continue.

## Chapter 12 Essay- Winner of the Bengt Magnusson Memorial Prize 2011

Winner of Bengt Magnusson Memorial Prize at IAPD Congress in Athens 2011

### The Role of the Dentist in Child Protection: Past, Present and Future

C Harris (Submitted under Nom de Plume of Charlie Heather)

#### 1.0 The Past

##### 1.1 History

The role of the dentist in child protection has developed greatly over the past 50 years. This has coincided with changing attitudes of the world towards the treatment of children. Child abuse and infanticide have existed in society since ancient times and many reasons were given to justify them<sup>1</sup>. Previously parents were left to decide how they would treat and discipline their children and it was unlikely that anyone would intervene. This began to change in 1874 in New York, when legal and social involvement in child protection began with a child called Mary Ellen<sup>2</sup>. She was chronically abused but in the absence of any laws the police were powerless to help. Her case was eventually reported to the courts by The Society for the Prevention of Cruelty to Animals on the basis that Mary Ellen was a member of the animal kingdom. This led to the formation of the first Society for the Prevention of Cruelty to Children in New York in 1875. In the United Kingdom the Society for the Prevention of Cruelty to Children was not founded until 1884, nine years after this first society.

The medical professions' involvement in child abuse and child protection began with radiologist John Caffey, in 1946<sup>3</sup>. In his paper he observed that children with subdural haematomas sometimes showed changes in their long bones which were suggestive of previous trauma. Following this paper more work was published<sup>4</sup> which suggested this sort of trauma in young children may have been inflicted wilfully by the child's carers. This led up to the publishing of C. Henry Kempe's landmark paper in 1962, "The battered child syndrome"<sup>5</sup>. He described this syndrome as a clinical condition which should be considered in any child with "evidence of fracture of any bone, subdural haematoma, failure to thrive, soft tissue swellings or skin bruising, in any child who dies suddenly, or where the degree and type of injury is at variance with the history given". The



publication of this paper led to the passing of laws in all states in the USA which required mandatory reporting of suspected cases of child abuse by health professionals (including dentists).

## 1.2 Types of abuse

From the 1970s onwards there have been many publications in the dental literature surrounding the dentists' role in child protection and the identification of child abuse. Many of these have concentrated on physical abuse of children. This is not surprising because as early as 1966<sup>6</sup> it was recognised that at least 50% of physically abused children have injuries affecting their head, face or neck, all areas readily visible during a normal dental examination. Studies of the prevalence of injuries to the head, face and neck of physically abused children have been repeated all over the world and it has been consistently shown that 50-75% of physically abused children have orofacial signs of abuse which would be obvious to a dental practitioner<sup>7, 8, 9, 10, 11</sup>. Orofacial signs of physical child abuse include bruising of soft tissues (especially those that do not overlie a bony contour), abrasions, multiple injuries, bruising of different vintage, scarring of the lip, dento-alveolar injuries, fractures, burns and "tattoo" injuries which reflect the shape of the offending object. As many of these injuries can occur accidentally it is important for dentists to get detailed histories of injuries from the parents / guardians and the child themselves. If the explanation for the injury does not fit with the clinical picture then the dentist should have a high index of suspicion of child abuse.

Physical abuse is not the only form of child maltreatment that dentists may have suspicions about. In the United Kingdom there are four recognised categories of child abuse: physical abuse; emotional abuse; neglect; and sexual abuse. In Scotland a fifth category, non organic failure to thrive, is recognised. However the future of this category is currently under review.

Current literature suggests that dentists, as well as being well placed to detect physical abuse, should also be involved in the recognition of neglect<sup>12, 13</sup>.

Neglect is defined as "the persistent failure to meet a child's basic physical and / or psychological needs, likely to result in the serious impairment of the child's health or development"<sup>14</sup>. Physical neglect was defined in 1975 by ten Bense and King as failure of a child's caregivers to provide the basic physiological

needs for the child including failure to provide adequate nutrition and clothing, proper medical care and a safe environment<sup>15</sup>. Emotional neglect seems to be harder to define but Schwartz et al<sup>16</sup> put it very simply as “lack of love and attention”. In 1981 a paper by Blumberg and Kunken<sup>17</sup> stated that untreated dental decay may be the first sign of child abuse or neglect. Indeed the authors reported two cases where child abuse was identified following the dental diagnosis of “nursing bottle syndrome”. Many studies in the dental literature concerned with orofacial signs of abuse have looked at physically abused subjects only, and have not included cases of neglect. However neglect can be just as serious and worrying as physical abuse. Indeed in their paper on fatal cases of child abuse and neglect in Denmark in 1984 Gregerson and Vesterby reported the cause of death in 4 of the children in their study as neglect / malnutrition<sup>18</sup>. Historically Badger noted that reporting of dental neglect as part of physical neglect was nearly non-existent in 1982<sup>19</sup>. He suggested that diagnosis of severe dental neglect does not require any additional training of dentists and gave some guidelines as to how to identify suspected neglect cases. The American Academy of Pediatric Dentistry (AAPD) defines dental neglect as the “wilful failure of parent or guardian to seek and follow through with treatment necessary to ensure a level of oral health essential for adequate function and freedom from pain and infection”<sup>20</sup>. The British Society of Paediatric Dentistry (BSPD) published guidelines on dental neglect in 2009<sup>13</sup>. Their definition is “the persistent failure to meet a child’s basic oral health needs, likely to result in the serious impairment of a child’s oral or general health or development.” The use of “persistent” rather than “wilful” makes this definition more wide ranging than the American definition.

Dentists may also come into contact with children who have been sexually abused. Although this type of abuse was recognised in the dental literature as early as 1975<sup>15</sup> the role that dentists have in identifying it does not appear to be described until the 1980s. The general features that literature suggests dentists should be aware of are oral manifestations of sexually transmitted infections in children whose behaviour is withdrawn<sup>17</sup>. Fontana<sup>21</sup> suggested that simple signs such as sudden changes in eating and sleeping patterns, nightmares, and fears of adults not feared before are important in establishing a diagnosis of sexual abuse, however these are non-specific signs. Casamassimo devoted a whole

article to child sexual abuse and the paediatric dentist in 1986<sup>22</sup>. In his article he lists signs and symptoms of child sexual abuse that may alert a dentist as:

1. A history of sexual assault
2. Physical findings of venereal disease
3. Pregnancy in a child younger than 12 years of age
4. Direct reports from children

He suggests that a child's preoccupations with sex, precocious sexual interest or indiscrete masturbatory activity are "second level indicators" of sexual abuse. Other authors have described this as an "age-inappropriate sexual knowledge"<sup>23</sup>. Self harm and low esteem are also recognised as sequelae of child sexual abuse. In all such cases Casamassimo recommends referral to medical colleagues for complete examination. Dentists should however have knowledge of the oral appearances of sexually transmitted infections and what tests are required to confirm or refute their differential diagnoses. Child sexual abuse is thought to be the most under-reported type of child abuse and this was brought home to the dental community by Waldman in 1993<sup>24</sup>. In his article he quotes shocking statistics, one of the most notable being that 61% of the 12.1 million women who had experienced forcible rape in America had been victimised before they were eighteen years old and 4 million women had been raped at the age of ten or under.

Emotional abuse impacts on a child's mental health, behaviour and self-esteem and is now recognised as a component in all categories of abuse<sup>14</sup>. Signs and symptoms of emotional abuse may be noticed by dentists and include babies who are demanding / clingy or irritable, who also may have feeding difficulties and cry a lot. In school aged children there may be developmental delay, soiling or wetting problems, poor behaviour, and non-attendance at school or rejection by their peers. Teenagers who have suffered emotional abuse may exhibit problems with drugs / alcohol, behavioural problems, self harming, eating disorders or depression<sup>14</sup>.

Child abuse can occur in all classes and ethnicities although it is often more reported in poorer families. Kempe's formula for assessing those at risk of child abuse involved there being: something wrong with the parents; something

wrong with the marriage; something wrong with the child; life stresses; and parents who have no access to lifelines. Parental factors which may increase the risk of child abuse include: young parents of low intelligence (who have often been abused themselves); mother divorced/single cohabiting with person responsible for the violence; disability; criminal record; and emotional immaturity. Drugs, alcohol, poverty, social isolation, unemployment and marital stress may all contribute<sup>14</sup>. Where the child is concerned crying, soiling, disability and failed expectations may be contributing factors. Additionally premature babies and those that are the result of an unwanted pregnancy may be at higher risk of abuse<sup>14</sup>. A study by Sullivan and Knutson in 2000 showed that disabled children were 3.4 times more likely to have been maltreated than their non-disabled peers<sup>25</sup>. Wescott concluded that disabled children are judged more vulnerable because they experience greater physical and social isolation, a lack of control over their life and bodies, greater dependency on others and problems in communication<sup>26</sup>.

Other researchers have shown that children who have experienced abuse/neglect have a higher incidence of dental caries and other oral diseases<sup>27, 28, 29</sup>. Current research is ongoing in this area in Scotland.

### **1.3 Domestic Violence**

Domestic Violence is defined by the United Kingdom Home Office as “Any incident of threatening behaviour, violence or abuse (psychological, physical, sexual, financial or emotional) between adults who are or who have been intimate partners of family members, regardless of gender or sexuality”<sup>30</sup>. Research has shown a link between domestic violence and child abuse. In the 1990s it was shown that children who have been exposed to domestic violence are more likely to have behavioural and health problems<sup>31</sup> and in 60% of child abuse cases, where the father was the perpetrator, the mother was also abused<sup>32</sup>. This coupled with the fact that one in four women experience domestic abuse in their lives<sup>14</sup> means that there is a huge proportion of children who may be affected. Recent initiatives for dentists to tackle domestic abuse have been introduced in Scotland<sup>33</sup>.

## **2.0 The Present**

## 2.1 Legal Frameworks

In Scotland the legislative framework governing child protection started with the UN Convention on the Rights of the Child 1989<sup>34</sup>. The basis for children's rights is children's needs; because children are vulnerable and can't protect themselves, and their parents are not always in a position to protect them either, the state has an obligation to ensure that their needs (see table 1) are met. Following the Children Act (1989), the Children (Scotland) Act 1995<sup>35</sup> had three main themes:

- the welfare of the child is paramount
- no court or Children's Hearing should make an order or supervision requirement unless it is in the child's best interest
- The child's views, taking appropriate cognisance of age and understanding, should be taken into account where major decisions are made about his or her future.

This act also sets out what parental responsibilities are, namely:

- To safeguard and promote the child's health, development and welfare
- To provide direction until sixteen and guidance until eighteen
- To maintain regular contact with the child until he/she is sixteen (if the child is not living with the parent)
- To act as the child's legal representative until the child is sixteen

The last point is, however, subject to the Age of Legal Capacity (Scotland) Act 1991<sup>36</sup> which provides that a person under sixteen shall have legal capacity to consent on their own behalf where he or she understands the nature and possible consequences of the procedure or treatment.

## 2.2 High profile cases

Despite legislation the U.K, and Scotland itself, have had some recent high profile tragic cases of child abuse. Victoria Climbié died aged 8 years old in London in 2000 having suffered physical, sexual and emotional abuse and neglect at the hands of her great aunt and her aunt's partner. Victoria was failed by several social service departments, health authorities and the police. It was lack of collaboration between these agencies which failed to piece together the jigsaw of abuse which Victoria was suffering. The Laming report<sup>37</sup> which resulted

from the inquiry following Victoria's death acknowledges the difficulty in building up a picture of abuse.

“The front line services charged with the protection of children have a difficult and demanding task, adults who deliberately harm, neglect or exploit the vulnerability of children go to great lengths to conceal their behaviour”

Lord Laming 2003

Abusers go to great lengths to avoid detection and take children to many hospitals. If medical notes are not assimilated and viewed against social work and police profiles then the entire picture remains hidden. Findings of the dental team may also be very important in building up a case and suspicions must be shared. Child protection is everyone's responsibility and every person who works with children has that personal responsibility.

Kennedy McFarlane was a little girl from Dumfries in Scotland who died at the hands of her stepfather. Following Kennedy's death Jack McConnell (Minister for Education) commissioned a national audit into child protection in Scotland- this led to the publication of “It's everyone's job to make sure I'm alright”<sup>38</sup>. This included 17 recommendations to improve child protection in Scotland, the very first recommendation being that “all agencies should review their procedures and processes and put in place measures to ensure that practitioners have access to the right information at the right time”

Caleb Ness was born in July 2001 in Lothian in Scotland and died 11 weeks later as a result of brain injuries due to shaking. Following this The Criminal Justice Scotland Act 2003<sup>39</sup> has made it illegal to shake a child, hit them anywhere on the head or hit them with objects.

### **2.3 Dental practitioners and child protection**

Previous work by Cairns et al in 2005<sup>40</sup> showed that although 29% of dentists in Scotland had suspected child abuse only 8% had referred these cases on to the appropriate authorities. This disparity between those suspecting the need for child protection services versus those who actually refer these cases

has also been described in the UK by Welbury et al <sup>41</sup> with regard to General Dental Practitioners (GDP's) and by Harris et al <sup>42</sup> for dentists and dental care professionals with an interest in paediatric dentistry. The phenomenon of under-reporting is an international problem as shown by work in the USA<sup>43, 44,</sup>  
<sup>45</sup>, Australia<sup>46, 47</sup>, Jordan<sup>48</sup>, Greece<sup>49</sup> and Denmark<sup>50</sup>.

In 2006 all dental practices in Scotland were sent a document entitled "Child Protection and the dental team"<sup>12</sup>. This is a training manual for the dental team aiming to improve their knowledge on the signs and symptoms of child abuse and neglect along with information regarding appropriate generic referral protocols. In addition to this, NHS Education for Scotland has funded inter-agency postgraduate training courses on the topic of child abuse and neglect. Inter-agency training involves participants from various health disciplines as well as people from education and social services. Training in Child Protection is also a core topic in vocational training/dental foundation programmes and forms part of the undergraduate dental curriculum in UK dental schools.

Although reporting of suspected cases of child abuse/ neglect is not mandatory in the UK as it is in the USA the responsibilities of UK dental teams are clearly outlined in the General Dental Council's standards guidance:

"As a dental professional, you have a responsibility to raise concerns about the possible abuse or neglect of children or vulnerable adults. It is your responsibility to know who to contact for further advice and how to refer to an appropriate authority (such as your local health trust or board)."

GDC 2008<sup>51</sup>

The BSPD's policy document on dental neglect in children<sup>13</sup> further emphasised the role of the dental team in child protection. The BSPD recommend that:

"Dental Services should address the needs of vulnerable children and have systems in place to safeguard children"<sup>13</sup>.

An appropriate current pathway for dentists regarding referral of children where there are welfare concerns is shown in diagram 1. Further information about when to suspect and what to do when child abuse/ neglect is suspected is

given in “Child Abuse and the Dental Team”<sup>12</sup>, “When to suspect Child Maltreatment”<sup>52</sup> and the BSPD policy document on dental neglect<sup>13</sup>.

There are 4 pathways suggested in diagram 1. The first is where the dentist or another member of the dental team is concerned about dental neglect only. In this case a letter should be sent to the child’s health visitor or school nurse, depending on the child’s age. This letter facilitates information sharing and makes the health visitor/ school nurse aware of the dentists concerns about failures to engage with dental services. A template for such a letter can be found in the appendices of both “Child Protection and the Dental Team”<sup>12</sup> and The Scottish Dental Clinical Effectiveness Programme guideline on “Prevention and Management of Dental Caries in Children”<sup>53</sup>.

The next branch of the diagram explains what to do if the dentist is unsure about their concerns. In this situation the dentist can contact their local child protection advisor to discuss the case. Child protection advisors are senior qualified nurses with a background in health visiting. They also have postgraduate qualifications in child protection and usually have many years experience providing advice and support to other colleagues in the health service. The child protection advisor may carry out further investigations then get back to the dentist; refer the case directly to the lead paediatrician for child protection; or they may ask the dentist to refer the case directly to social services.

The third branch of diagram1 illustrates that if a dentist is aware of a definite issue requiring referral then they are able to refer directly to social services. The last and fourth branch of the diagram reminds dentists that if a child is in immediate danger then they should refer the case directly to the police.

### **3.0 The Future**

What will be the role of the dentist in child protection in the future? In an ideal world every dentist will have access to their local child protection guidelines. They will know exactly who to contact (and how to contact them) should they ever have a concern about any child patient. In addition child



protection services, general medical practitioners, school nurses and health visitors etc will feel happy to contact dentists to ask for help and advice regarding any child they feel would benefit from a dental examination. In our digital age perhaps we will be able to share child protection concerns efficiently and securely through local or national child protection networks. Various papers have published recommendations that there should be dental representation in every local area child protection committee<sup>11, 12, 13</sup>. Recent research with GDPs in Scotland, however, has shown that out of 628 Scottish GDPs only 4 were involved in multi-agency child protection committees, and most of these were through church groups rather than dental capacity.

Previous papers looking into the rates of orofacial injuries in physically abused children have all concluded that it is likely that many oral injuries are missed because no dentist is involved in the acute medical examinations of children where there is a suspected child protection concern. In the future the medical teams involved should include a consultant or specialist in paediatric dentistry.

In Greater Glasgow and Clyde children for whom there is a welfare concern may be referred for a comprehensive medical examination. The medical examination is performed by a consultant paediatrician in the community setting. Historically the paediatrician would have a cursory look in the child's mouth but now children are seen by a qualified dentist who performs a basic oral examination and copies a report of this, with their recommendations, to the consultant paediatrician. This is a relatively new innovation but already it is beginning to spread to other health boards. There will eventually be a network of people all over Scotland who are involved in the oral assessment part of the comprehensive medical assessments. This managed clinical network will be run by paediatric dental specialist services. Additionally a national database of children who have had comprehensive dental assessments will be kept in order to allow follow-up and monitoring of the engagement of these children (and families) with dental services. This will facilitate early warnings of families who don't engage with dental services and thus allow involvement of other professional such as health visitors who can then help to facilitate attendance and reinforce the importance of oral health.

Dentists should be mindful that adult patients they treat with substance abuse issues or those suffering domestic violence may have children in their care. In Scotland a charity called 'Medics Against Violence' recognised that dentists have an advantageous position to intervene in domestic abuse. They have developed an intervention for dentists to use in suspected cases of domestic abuse<sup>33</sup>.

When working with families and other agencies or professionals some essential principles should be remembered<sup>54</sup>:

- Treat all family members as you would wish to be treated
- Ensure families know that the child's safety and welfare must be given first priority
- Be clear, open and honest about the purpose of your professional involvement, your concerns and responsibilities
- Listen to the concerns of the child and their family
- Take care to distinguish between your professional role and responsibilities and your personal feelings, values, prejudices and beliefs.
- Respect confidentiality

There are times when it is not possible to work in partnership with parents and in these circumstances the best that can be done is to keep parents informed while liaising with other agencies.

Once a managed multi-agency clinical network is established it will give the opportunity for research collaborations and learning through clinical governance including case presentations, peer learning and audit. This will highlight the importance of multi-agency working which is a key theme of the dental literature throughout the history of dentistry's involvement in child protection.

In the future it is hoped that there will be a wider evidence base available to help dentists make informed decisions regarding treating children with dental neglect. In addition more research into oral disease and its relationship to child

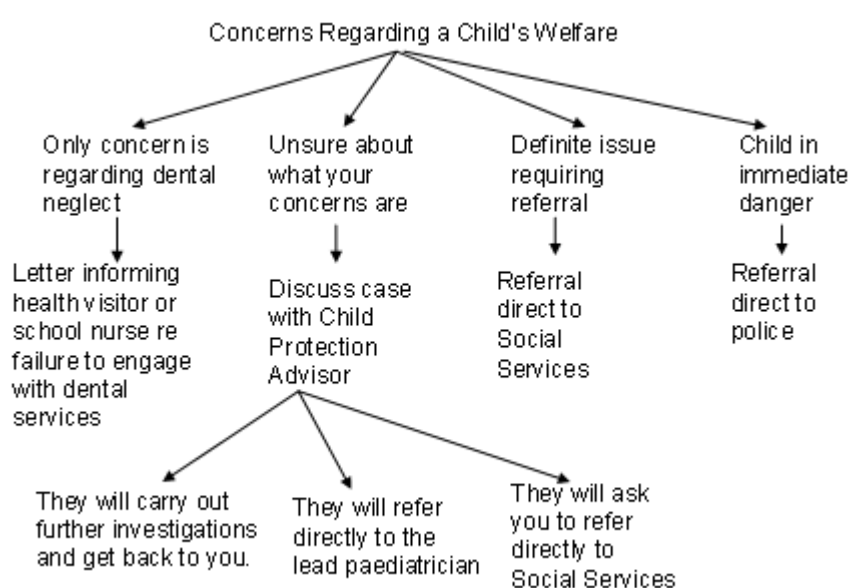
maltreatment will inform future policies. This could lead to dedicated pathways of care for these children and help for families to ensure that all their needs, not only dental, are met.

#### 4.0 Legends

**4.1 Table 1: A framework of children's needs (adapted from Child Protection Reader 2007<sup>55</sup>)**

Physical needs	Social, economic and cultural needs	Psychological and emotional needs
Shelter	Knowledge of and respect for own language, religion and culture	Opportunities for play
Health care	Stable social and economic environment	Access to education
Water and sanitation	Recognition and respect for emerging competencies	Stimulation
Protection from environmental pollution	Access to appropriate guidance and support	Access to age appropriate information
Adequate food	Respect for privacy and confidentiality	Opportunities to be listened to and respected
Adequate clothing	Opportunities for friendship	A family environment, whether biological or a substitute family
Protection from exploitation and abuse	Opportunities for play	Access to appropriate guidance and support
Protection from violence	A family environment, whether biological or a substitute family	Respect for privacy and confidentiality
	Access to education	Recognition and respect for emerging competencies
	Access to age appropriate information	

**4.2 Diagram 1: Flowchart for dentists with concerns regarding welfare of a child**



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